APPLE CHAT

Vol 3 No 2

AppleChat

Vol 3 No 2

The Music Issue

A9M0103

MIDI
Connector
Kit

Apple //e

Apple IIcs

Macintosh II

MAC S E

MAC PLUS

LaserWriter IISC   LaserWriter IINT   LaserWriter IINTX   ImageWriter LQ   ImageWriter II

Prepared by Conrad Silvester

 Education

Editorial

Well the response to my request for letters was overwhelming!! Not a one!

Ok, Ok, I know we all have too much to do and not enough time to do it, but if you feel inclined at a later time to send me a letter I will publish it (provided it is decent etc).

I have been involved with the Apple Business Forums during March, April, May and June and so have been somewhat difficult to catch. However I do read my AppleLink address every working day so if you Link me at AUSTSALESSUP you will get a response.

The fascinating thing about the Biz forums is the people who have never even seen what a Macintosh can do. After this experience I think a number of educators can feel somewhat smug in their decision to use Apple equipment, some of the horror stories we hear are truly amazing.

Anyway, it's good that the Apple II is now included within the AppleShare environment. The GS will be fully functional later this year or early next with workstation software in a similar fashion to the Mac. The Apple IIe will require a card and menu management software (yeah the interrupts again). On a personal note by the time you read this I will have had holidays (June 3 lovely weeks, classroom teachers do not know how lucky they are!).

The Conference season should be in full swing also by the time you get this and I hope to catch you at one of them. Until then.

Conrad Silvester.

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What's happening

Errol Chopping is leaving his consultancy soon and returning to the coal face in the Western region. Tony Salvas has joined PowerLink in Melbourne and we all wish him well in his new role. Ralph and Tricia had a good time in Alice Springs a couple of months ago. They attended the Computer Pals across the world conference which was held in Alice. The next conference will be in the US and I believe Apple will be sponsoring. Anyone who wants to know more should contact Malcolm Beasley at Turramurra High School, Turramurra NSW.

Jacqui Dean has written an article about the directions of Computing in Western Australia for the first issue of IT 1988.

Doug Piper was at Apple during April and was actually seen wearing a tie!!!

Sue Daniels has joined the education marketing team at Apple. Sue has a strong teaching and marketing background in music and worked for the Sydney Opera Company prior to joining Apple.

John Paull, our Tertiary Education Manager has been blessed with a daughter, both Sharon and daughter are doing well. John however appears to be suffering from the 2 am feeding sessions.

Ray Saunders has run his annual music and graphics camp at Vision Valley Arcadia and was most pleased with the success.

Rob Walker is conducting a tour of the schools in his region with various musical devices, everybody seems to interested in Music right now, Sue will have lots to keep her occupied!

Ian Scott of the Elizabeth Computer Centre has fitted in well to replace Roger MacShane and is getting very interested in the potential of the IIGS for his schools.

The rumour that Janis Vucens is not indulging in the odd refreshing ale is vicious,

Tricia at the Alice.

unfounded and completely scandalous. The fact that his doctor has told him to steer off the grog or else has been verified!!

The NSWCEG has a new President, Toni Downes, yes Toni is back in getting involved with Computer Education and has already got myriads of people working on the Computer Week project for NSW.

The Australian Primary Principals Conference produced some fascinating scenes (none of which can be publicised!!!) and was very well attended in this bi-centennial year.

The NSWCEG Committee have been running up quite a phone bill recently due to a new idea promoted by Jim Rennie of NDEC.

Pat Beaton, the lady who gave a music workshop for primary teachers at Leura last year is about to publish a book on using music, computers and teaching ideas. Ian Webb at the O'Connell Centre Stuart St, Griffith will be able to pass on any requests for Pat's book. Cost is around $15.00.

Michael Thompson has just had a baby boy and is settling in well to his new role with ACT office equipment. John Skewes, from Computer Knowledge also has a baby and reckons travel is for the birds right now.

Bruce McCarthy was reported to be considering switching his football team support from Collingwood to another team after last year however is now predicting a Collingwood flag for 88.

Odyssey (John Sculley's book) has proven very popular in many parts, so popular in fact that my copy lent last year still has not returned!!
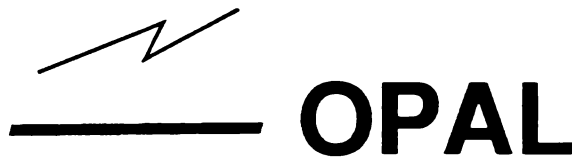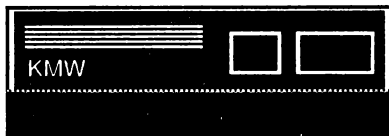
Di has moved to her new house (she needed a week to pack!!).

🍎 Education

OPAL
A Powerful Australian Mainframe/
Mini Communications Package

OPAL is a very sophisticated peer to peer, including front-ending host software, system available today for connection of Macintosh computers to a variety of different mainframe/mini systems.

KMW

OPAL

Using Opal you can easily and simply access and retrieve information from a mainframe database. This allows casual users to produce reports simply via a series of mouse clicks.

VAX 6500
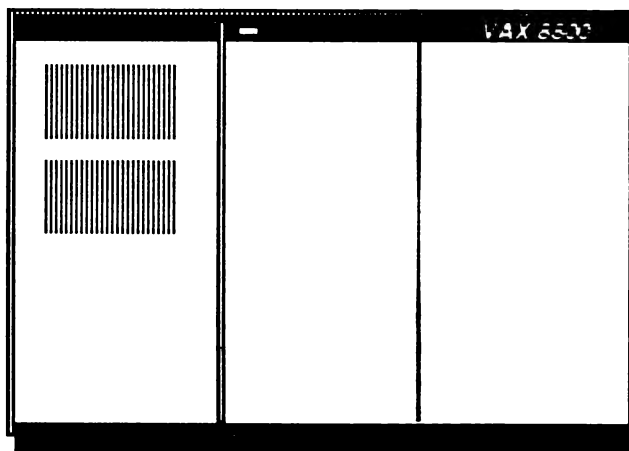
OPAL can be used as a front-end to any electronic mail service, ranging from small scale 'office automation' systems to national Telecom provided services.

 Education

The Basic Connection

In a basic one to one connection the Macintosh is usually connected by an RS232 cable directly to the 'host' computer. In many cases the 'host' is another microcomputer or perhaps a micro based Unix or Pick box.
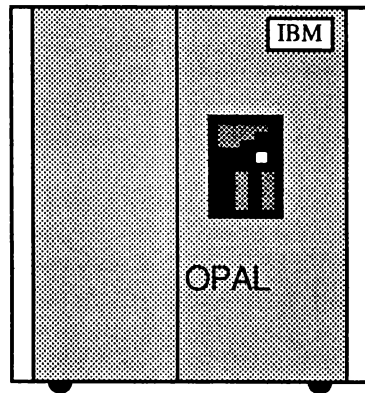
A star Network

The star network is a very common configuration for connecting multiple Macintosh workstations to multi-user minicomputers and mainframes. Usually the connection between host and workstation is either an RS232 or RS422 cable.

OPAL   OPAL
Macintosh   Macintosh

OPAL   OPAL
Macintosh   Macintosh

Star Topolo-

Education
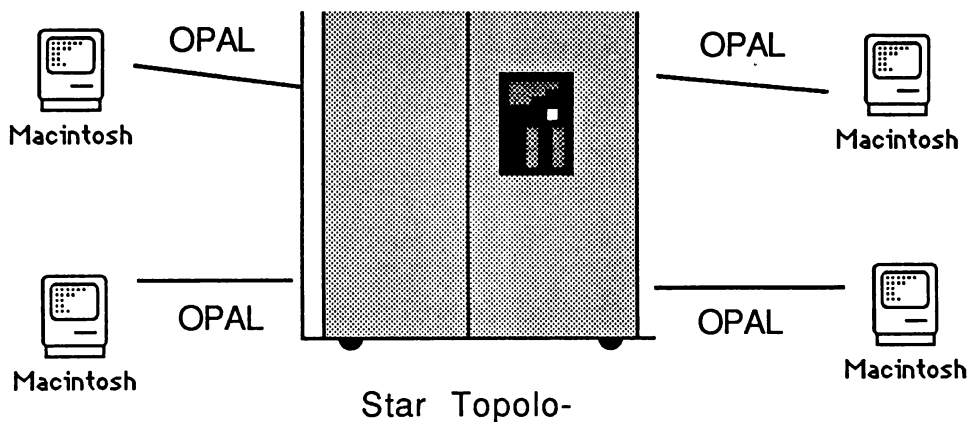
A hybrid network

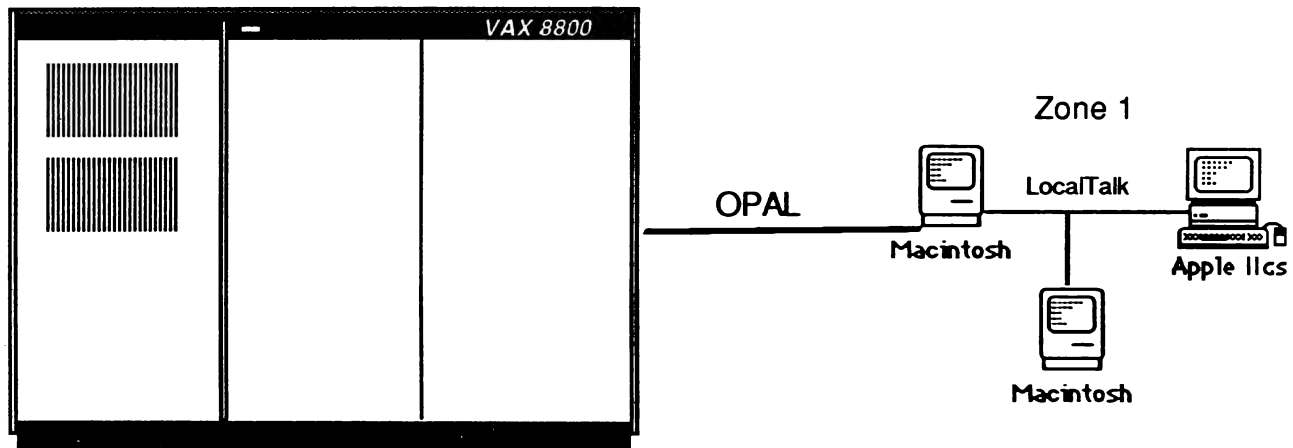This allows for the connection of multiple Macintoshes to an existing multi-user host computer. As well as being connected individually to the host the workstations are also interconnected by an AppleTalk network. This configuration allows all workstations to share expensive devices such as laserprinters and file servers.

OPAL is an Australian developed and designed product which is enjoying growing export success. It is designed to be a 'shell' system allowing for adaption to individual mini or mainframe systems in a somewhat similar method to Apple File Exchange scripts. OPAL has currently scripts to support connection to the following systems/environments/terminals.

ADDS	Pick	ADDS Viewpoint
AWA	Unix	ANSI
Data General	VMS	AWA VTE6/R
DEC	AOS	Data General 210/410
IBM	MS-DOS	DEC VT52
Olivetti	Information	DEC VT100
Pertec	Primos	DEC VT220
Pyramid	DPC/OS	Wyse 50
Wang	Wang/VS	Wang 2110
Wicat	Wang 2200	Lear-Siegler ADM3A
AT & T	any host sup-	Perkin Elmer 6312
Concurrent	porting ASCII	Prime PT-25
Discovery	Asynchronous	Teletype
Fortune		Datapoint 8220
McDonnell-Douglas	Further information on	Televideo 925
Perkin-Elmer	OPAL can be obtained by	
Prime	phoning 02 957 4312,	Education
Ultimate	ask for Tony Corcoran.	

Some Technical tips -
reprinted from Tech Tidbits

?: Drive won't work

I have an Apple clone connected up to an Epson Printer using the Marvel Disk drive controller Phone Wire cable, four third party, no-brand name disk drives, a drive controller card that I built from a model in "Electronics at home" magazine, and I have followed the instructions on the back panel of the "Your Home Patch Construction Set" package to patch my System software to work on my clone. My problem is this. Can you tell me what size diskettes I need?

A: Ummm.

LaserWriter IISC and the Chooser

? After connecting a LaserWriter IISC to my Macintosh, I am unable to select it in the Chooser. After selecting the IISC icon in the left hand window of the Chooser, it never appears in the right hand window, and therefore can't be selected. Is there a new version of the Chooser?

A: No, the only devices that will appear in the right hand window of the Chooser are those capable of being networked. Since the LaserWriter IISC is not capable of being networked, it did not appear in the window. Directly above the window, however, you should see "LaserWriter IISC Selected" once you have made the correct icon selection in the left hand window of the Chooser. You can then quit the Chooser and proceed with printing. The correct version of

the System to use with the LaserWriter IISC is 4.3 by the bye.

IIGS and ImageWriter LQ

? The Apple IIGS is the only Apple II capable of printing at 19200 baud. How do I configure the ImageWriter LQ to print at that speed?

A: The dip switch 2-1 and 2-2 set the baud rate of the printer. If switches 2-1 and 2-2 are ON, the baud is set to 19200. If these two switches are OFF, the buad is set to 9600. Bye the bye, ON = closed and OFF = open at the moment.

Mac II on End?

? Can I use my Mac II standing on end?

A: Apple DOES NOT recommend that the Macintosh II CPU be used standing on end. The Macintosh II was designed to lay flat on its rubber feet.

Quick IIc ROM identification procedure

? How can I tell if my IIC has the new or old ROM?

A: 1. Switch on the //c and press Control-Reset to stop the drive from spinning.

2. Type CALL-151 and RETURN to enter the monitor.

3. Type SHIFT 1 (!) and press RETURN.

If the prompt changes from a * to a !, you have the new ROMS, if

it remains a * you have the old ROMS.

AppleWorks 2.0 on the IIGS-random crashes.

? When using AppleWorks 2.0 on the Apple IIGS with the new ROMS it seems to crash every so often for no reason. How come?

A: All versions of AppleWorks have on them an early version of ProDOS which does not operate correctly with the new ROM's in the IIGS. Copying version 1.4 of ProDOS8 to the AppleWorks disk from the latest System disks for the IIGS (your local reseller will have these) cures the problem. ProDOS8, on the Systems disk is file "P8". AFTER copying it to the AppleWorks disk, rename it ProDOS. Those using Access II, version 1.2 should also update their disks with ProDOS Version 1.4.

AppleFile Exchange and the Works-to-Works Transporter

? Is the Works-to-Works transporter script public domain?

A: Yes , your local Apple Authorised Reseller will be able to provide you with the Works to Works Script for Apple File Exchange and this script IS public domain.
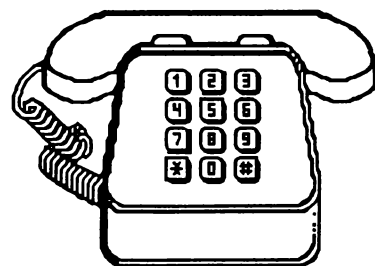
Computers in Music

As many people may have realised the Apple IIGS and Macintosh have powerful capabilities in the field of music. Apple Australia has recently taken on board Sue Daniels, formerly a Music Coordinator who has great deal of expertise in the musical field.

The number of products for both

Every time I think I have the score right .....

Macintosh and Apple IIGS that are available for use by musicians is large and growing ever larger. What follows is a quick run down of the areas of music where computers are used and some products which may be used in that category. Sue Daniels would be delighted hear from people with an interest in this area.

Introduction

Computer technology is having a major impact on the entire music industry - from the way music is written, performed and recorded to the way acoustic and synthesised sounds are captured,

Gee, I didn't know it could do that!!!

manipulated and reproduced. Computers are used today by people in every aspect of the music industry, from composers, performers, arrangers, and sound and special effects designers to instructors at schools across Australia. Computers are being used in all varieties of music - pop, rock, jazz, new age, classical and experimental pieces. Music created with the assistance of computers no longer has to sound 'computerised' or mechanical. Recent advances in software and hardware technologies give amateur and professional musicians the ability to realise their own musical potential.

Many of the same technologies tapped by the professional musician are now available to the average consumer. This includes enthusiasts who have become more interested in music through the high fidelity of new recording technologies, such as compact discs. Others always had an
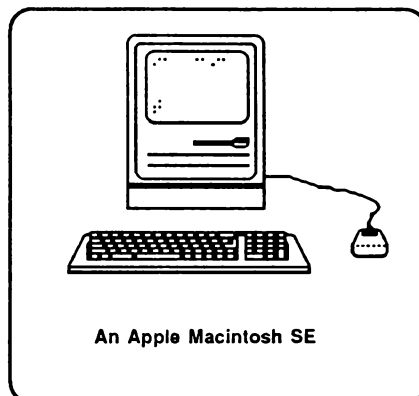
An Apple Macintosh SE

interest, but for some reason or other did not pursue it as an active hobby or avocation. With computers, low cost synthesisers and music software, this group of adults and their children can now explore their own music potential.

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MIDI
Connector
Kit

The Apple MIDI Interface Kit for Apple IIGS and Apple Macintosh.

Apple IIcs

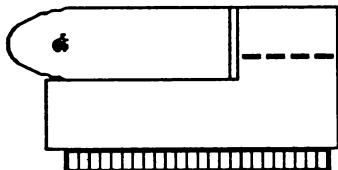The Apple IIGS, an excellent tool for music education.

The key to this explosion in music has been the development of the computer's ability to connect and exchange information with various electronic instruments through a standard called MIDI (Musical Instruments Digital Interface)*.

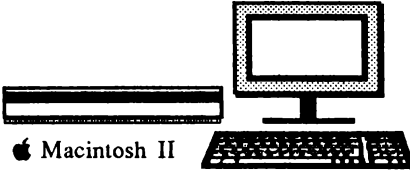* Midi is a serial baud rate of 31.25 Kb with a couple of special features.

Education

8

The MIDI Standard, which was first released in August 1983, arose from musicians interests in methods of triggering sounds from other synthesisers using a master keyboard. Computer users quickly recognised the potential of MIDI. Thanks to special MIDI software, personal computers can be used as sophisticated control devices for capturing and sending performance information to a variety of instruments.

Apple has achieved a leadership position in the Music market, serving the professional and amateur musician as well as the music student. A Macintosh or Apple IIGS equipped with music software, a MIDI interface and MIDI equipped instruments provides musicians with more creative control over their work than ever before. While these computer systems cannot transform a beginner into an advanced player, they allow musicians at any level to get the most from their music.

The categories where an Apple can help are described below, Sue Daniels will be able to advise as to the suitability of particular packages for your regional needs:

Apple's LaserWriter II series printers, a high quality, quiet, efficient printer series that can effortlessly combine the text and graphics produced by the Macintosh and Apple IIGS computers.
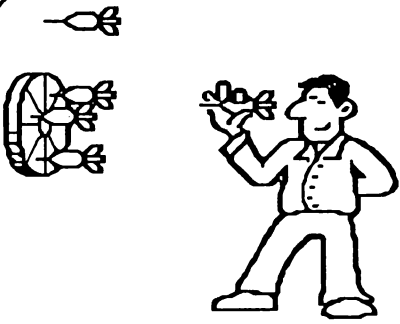

🍎 Macintosh II

The Apple Macintosh II - a color Macintosh with the ability to use produce full steroe sound and allowing the fast and effective use of music software/hardware combinations.

1. Sound editors and librarians

In the past, musicians had two methods of storing sounds for their synthesisers: inside the instrument itself or on cartridges that are inserted into the synthesizer to download new sounds. Once inside the synthesizer, these sounds could be changed or edited by the musician. But a musician could only change the parameters of the sound patch (such as attack, sustain, decay, or release) by using cursor keys to edit numeric values displayed in small lit windows on the instrument.

For many musicians, who today have a variety of instruments with

Prior to computers a variety of systems for manipulating music electronically were envisaged and designed.

hundreds of sounds from different manufacturers and need to easily customize sounds, the older methods can be sometimes limiting.

With editor/librarian software, musicians can now store sounds on more accessible 800K disks or hard disks for a much reduced cost. They can review the entire library of sounds for an instrument without having to insert and load sound cartridges. Sounds that are displayed on the computer's screen as two dimensional graphics are also far easier to manipulate. Possible products which may interest you

ImageWriter II

ImageWriter LQ

Two dot matrix printers supplied by Apple, both of which can be used by any Apple II or Macintosh computers.

in this area are, D-50 Design, DMP7 Pro, Drum File, FB PRO and TX81Z PRO, FX Designer, Librarians with Patch Factory, MIDI Lab, MidiPack, Opcode Editor/Librarian, Passport MIDI Voice Librarians, Roland D-50 Patch Editor/Librarian, Sound File, Sound Lab, TX802 PRO.

🍎 Education

2. Sound Sampling and Design

In theory, any instrument or sound can be created by an equation with the right calculations. But in reality, many acoustic sounds are difficult to accurately reproduce in this manner. A special class of synthesizers, called samplers, and an approach to the capture and creation of sounds for this instrument, called sampling synthesis, were created to deal with this problem.

A sampling synthesizer doesn't create sounds by calculating them. It plays back a waveform
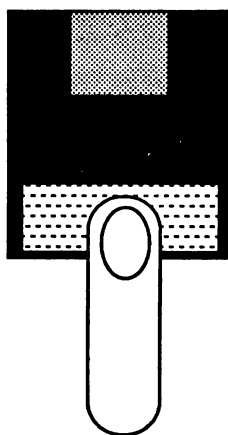
A 3.5 inch disk - This type of disk has proved increasingly popular in schools due to its relatively more robust design and capacity to store large amounts of data.

that it has recorded from an acoustic source, such as the string section of a symphony orchestra or raindrops falling on a sidewalk. To record this acoustic waveform, a microphone is used to convert the sound of the instrument into an audio signal, which is in turn sent to an analog-to-digital converter (ADC) The ADC turns the signal into a series of numbers that the synthesiser can store in its memory as a waveform for

playback by a musician.

Sound captured in this manner often needs to be modified in some way by the musician. For example, a sound can be looped to make it last longer or blended with various sounds, such as the attack of a guitar followed by a jet roar. These tasks require a high degree of editing capabilities that was either not available before or was only available on expensive instruments that the average musician could not afford.

With new software that facilitates sampled sound design and editing, and lower cost sampling synthesizers, the average musician now has greater access to the world of sampled sound.
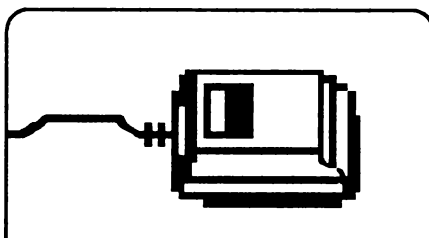

The Mouse - A device pioneered by Apple as a means by which people can manage and use a computer without learning complex, psuedo English-type 'commands'.

Possible products which may interest you in this area are Softsynth 2.0, Sound Designer and Universe of Sounds.

3. Music notation and publishing

Previously, musicians had to create, by hand, musical manuscripts such as lead sheets for rehearsals, recording sessions or performances, which was a time-consuming task. If they had to change a part in a song, such as adding a bridge, changing a key or rearranging an instrument
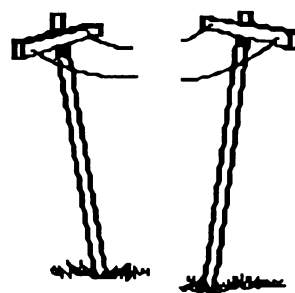
As computers can be linked via the telephone the possiblities for electronic exchange of music between schools becomes a distinct possiblity and 'Piano pals across the world' concepts become feasible.

solo, they either had to read a messy piece of music or redo the entire chart by hand.

With music notation and publishing software, musicians now have the same degree of flexibility in creating musical manuscripts that is offered to writers by word processors.

The computer enables composers and arrangers to create and publish quality sheet music. Musicians can select notes, rests and musical dynamics from palettes and place them on staffs.

 File   Edit   View

All Apple Macintosh programs are designed to appear consistent to the user. eg All Macintosh programs have an in the left hand corner, then the File menu and the Edit menu next to the File menu.

 Education

They can also add lyrics and line up the spacing on corresponding notes with the appropriate syllables of the words.

Today's compositions can be transposed into a different key that automatically changes all the notes, sharps, flats and naturals, eliminating sight transposing at sessions. And any particular part or piece of music can be printed separately when needed.

Some products of interest here are Deluxe Music Construction

Network Interface

The Apple IIe and many other computers require a special card to be installed in the computer to enable them to transfer information to and fro. The Apple IIGS and Macintosh however have this facility built-in so schools considering multiple machines can inexpensively link them together in order to share expensive items like printers and send music to and fro. Schools wishing for more sophisticated networking facilities can install a software/ hardware solution called **A p p l e S h a r e**

Sequencer Set 2.0, Music Publisher, Professional Composer and the Pyware Music Writer for the Apple IIGS.

4. Sequencing

Sequencing is the most popular music-specific software application for professional musicians. With sequencing

software, a Macintosh can perform many of the functions of a highly sophisticated multi-track tape recorder. This allows a single musician to compose, arrange and perform all the parts of a song long before other musicians are brought in for rehearsal or recording.

Unlike a multi-track tape recorder, which records sounds, a computer captures "performance information" from each instrument as it is played by a musician. This includes information about what notes are being played, how long they are sustained and any special effects, such as pitch bend, modulation or pedaling.

When a computer is used as a playback device, it sends out this performance information as a set of instructions to each synthesizer or sound source, which recreates the original performance of the musician. In this manner, every part or track of a song, from the basic drum and bass lines to melody and harmony parts, can be played by a single musician controlling a number of different sound sources.

When instruments are played and
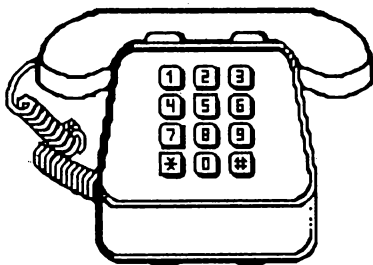
The telephone is the most common means by which computers exchange information, both within Australia and across the world. A modem is a means by which computers send and receive information through the telephone.

recorded directly to tracks on tape, a musician does not have the ability to experiment with different sounds for different parts of a song, to fix mistakes or to rearrange a piece without having to replay and rerecord several parts.

Because the Apple is used to capture performance information, and not the actual sounds created by an instrument, it allows a musician to change the sounds used to play the various parts of a composition, to easliy fix a wrong note or to extend an instrumental break in a song.

Possible products you may wish to consider in this area are

Modem 1200

Apple supply modems suitable for use with all Apple computers. These modems are also supplied with software to allow schools to connect to popular information services such as Viatel and KeyLink. Netcomm, an Australian company, also supply modems suitable for use with Apple computers at very reasonable prices.

ConcertWare+MIDI, Master Tracks Jr., Master Tracks Pro for Macintosh and MidiPaint.

5. Film and Video

Music and Sound effects are essential to the emotional impact of a film or video. Synchronising the sound of footsteps on pavement or of an orchestral crescendo to the action on the screen is an important and daily task for the film composer.
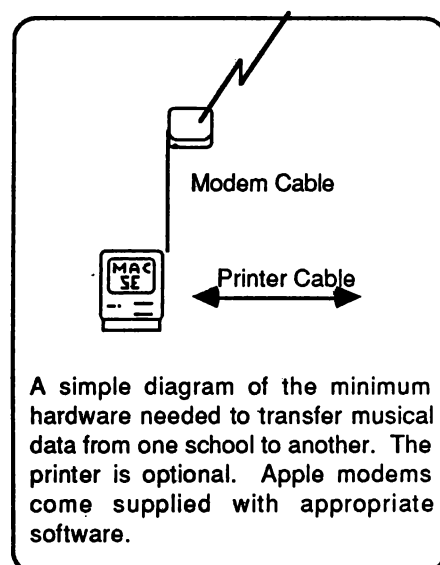
 Education

In the past, a composer had to redo much of the work on the sound or effects tracks if the order of events in a film was changed or reedited. This caused valuable loss of time. Today, there is specialised software that turns a Macintosh into a powerful audio-visual editing workstation, saving the film composer time in completing and synchronsing a score and providing more time for creative work.

Products of use in this area are CUE - The Film Music System 2.0, Q-Sheet.

6. Education

The Macintosh and IIGS are able to be used in Music labs and learning centers in all educational institutions Australia-wide. . Music education software can transform a Macintosh into a music teacher's assistant or a student's private tutor, helping the student learn about basic music theory and notation, including the basic rules or writing music, recognising notes and intervals and constructing and voicing chords.

Products of interest in this area include KidsTime, Listen 2.0, and Kids Time II.

Modem Cable

Printer Cable

A simple diagram of the minimum hardware needed to transfer musical data from one school to another. The printer is optional. Apple modems come supplied with appropriate software.
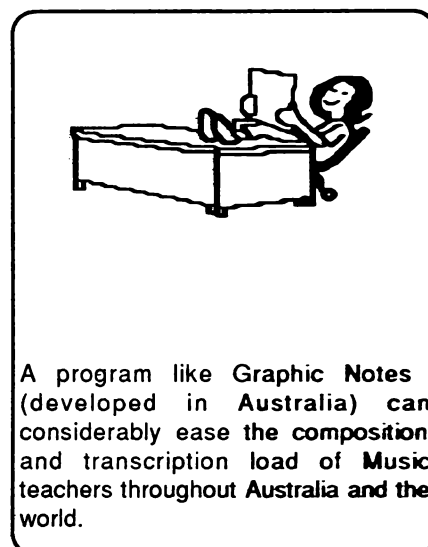
7. Creativity

It is not necessary to understand music theory or to be an expert musician to use a Macintosh for musical creativity. The products listed here provide music enthusiasts with a variety of ways to create music or to play along with musical parts created or controlled by the computer.

Products include Jam Session, M, ConcertWare+, Jam Factory, Studio Session, Upbeat, Instant Music, The Music Studio 2.0.

8. Hardware and Studio Software

A program like Graphic Notes (developed in Australia) can considerably ease the composition and transcription load of Music teachers throughout Australia and the world.

There are a variety of hardware products that customise both the Apple Macintosh and Apple IIGS computers to accomodate to the needs of both the professional and instructional needs of those with an interest in music. In addition there are software products that address the day-to-day needs and requirements of running the business end of a recording studio.Products include Passport MIDI Interface with Drum Sync and Passport MIDI Interface with Tape and Drum Sync as well as the SuperSonic Digitizer.


Children benefit from the clarity and high quality presentation of materials available with Macintosh and Apple IIGS computers. Musicians using these systems can confidently expect a consistent high quality output for their compositions and original works.

9. Composition

Playing or writing a piece of original music or perfecting a "music Classic", is the ultimate reward for the hours of practice a music student or enthusiast may devote to honing his/her musical skills. With sequencing and composition software, a single individual has the ability to compose, arrange and play all the parts of a composition.

The individual may also experiment with and change any part of the piece as desired.

Mick and Bianca (age 10)
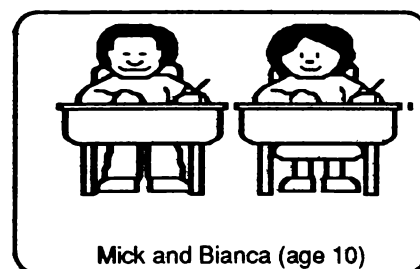
Products of interest here include Master Tracks Jr., Music Construction Set and the Pyware Music Writer.

 Education

This article was designed to give you some framework to extend your knowledge of the area of Music and computers. Like you I am learning in this area and will probably make lots of blues before I get it right. Nevertheless it is good to know that there is a wide variety of solutions available to allow for both the teaching and professional use of music with computers.

What follows is a list of contacts for those who wish to pursue a particular package or area.

Imagineering (Questor and Sense) are the distributors for The Music Studio 2.0, Jam Session and Studio Session. Infomagic distribute the Sonata font.

Sound Options (PO BOX 1138, Nth Fitzroy Melbourne) distribute FX Designer, SoftSynth 2.0, Q-Sheet, Jam Factory, M, Up-beat, Master tracks Jnr IIGS, Master tracks Pro, Listen 2.0, Midi Paint, Sound Designer and Sound Acclerator.

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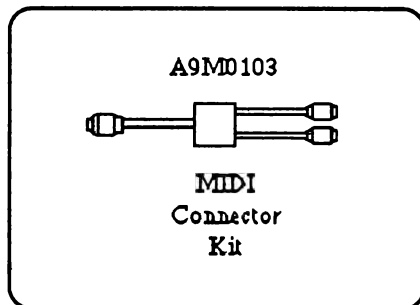
Electronic Communications (Qld) distribute Instant Music, Deluxe Music Construction Set and Music Construction Set IIGS.

Graphic Notes SA (42 Hurtle Square, Adelaide 5000, 008 882042) are the publishers of the Australian product entitled Music Publisher.

Symbiotic distribute Concertware+, Concertware + Midi, Kids Time and Kids Time IIGS.

Hutchings Music distribute Professional Composer and Venue Music distribute Performer.

Midiware (4A The Leemont Centre, 3 Kenneth Rd, Manly Vale 2093 (02 942 2511) distribute Pyware Music Writer IIGS. Other contacts are Music Junction in Qld, Festival Music in South Australia. Cognition WA (1932 Albany Hway, Maddington WA 6019 09-459866) are in the process of producing some excellent materials of use in schools.

 Education

What's new from Apple.

Some new items that may interest educators considering the year's program in their region and schools.

Apple Scanner

The Apple Scanner enables Macintosh users to import graphics and images into a variety of software applications. This flatbed scanner and its accompanying AppleScan software will give a better and more intuitive way of scanning graphics and images, allowing you to create the best possible scanned images quickly and efficiently.

The software is the feature that really sets this scanner apart from the others and is really well worth a visit to see it in action at your local authorised Apple Education Reseller. The facilities it gives you to enhance and manipulate scanned images are quite amazing. Also recently released is some OCR software which utilises the Apple Scanner and will provide a considerably simpler and more sophisticated system for scanning in those documents that you would like to modify and reproduce.

See your Local Authorised Education Reseller.

AppleCD SC

The AppleCD SC is Apple's first CD-ROM drive and optical media product. This product lets Macintosh and Apple II users retrieve information from digitally recorded CD-ROM discs.

From one 4.72" (12 cm.) CD-ROM disc, users have access to up to 550 MB of text, graphics, images and audio -- the equivalent of 700 floppy disks or 270,000 pages of typewritten text! Plus, this new drive has built-in audio CD capabilities.

The AppleCD SC is a stand alone external drive styled much like Apple's SCSI hard disks. It has a front-loading slot that enables the user to stack the drive on or under the CPU.

The AppleCD SC features include:

-- Support for Macintosh and Apple II operating systems. Apple II users must first install the new SCSI card, Revision C.

-- Support for the High Sierra operating system via a software upgrade available this summer.

-- 64 K RAM buffer for improved performance with the Apple II CPU.

-- Universal power supply ensuring compatibility with worldwide electric standards.

-- CD Caddy that encloses the disc in a protective case.

Headphone jack which provides convenient and private access to audio information.

-- RCA jacks -- two audio connectors for an external amplifier and speakers which enables the drive to produce stereophonic sound.

The AppleCD SC and the AppleCD SC Caddy will ship in late 1988. The AppleCD SC Caddies are available in boxes of five.

Some of the third-party CD-ROM titles for Macintosh and Apple II computers currently available are:

-- Kwikee INHOUSE PAL by Multi-Ad Services Inc. -- a library of encapsulated PostScript art. For information call 309-692-1530.
-- Medline Data Base by Aries Systems Inc. -- a collection of abstracts from the National Library of Medicine which includes the contents of three years of back issues of medical journals. For more information call 617-689-9334.
-- RealScan Real Estate Market Information System by LaserScan Systems, Inc. detailed public information on every piece of real estate in Broward County, Florida. For more information on other similar systems, call 305-595-3640.
-- Available this fall for the Apple IIGS and the Macintosh is the Visual Dictionary by Facts on File, Inc. It contains audio and graphic representations of dictionary entries and pronounces words in both French and English.

AppleCD SC (M2700)
AppleCD SC Caddy (M2705)

Inter•Poll

A network administrators utility which works in conjunction with a LocalTalk or Ethernet network to diagnose potential problems.

14

What's new from Apple.

The product will operate across network bridges in order to diagnose faults.
The product has a good network control feature, provides a constant network picture, assists in rapid network problem determiniation, establishs possible network bottlenecks including those caused buy bridges.

This is an Apple product with a recommended retail price of $199.00 and product code of M0697.

AppleShare 2.0
New Versions of AppleShare File Server, Print Server

AppleShare File Server, version 2.0, and AppleShare Print Server, an enhanced version of Apple's LaserShare, offer significant extensions over previous
versions and expand the power of those products for business, government and education users. In addition, the new versions add support for Apple IIe and Apple IIGS computers.

File Server, 2.0

The new features of version 2.0 improve server administration and start-up time, and security of data, applications and user information. These features include:

-- Foreground server administration: allows server administration
activity (such as adding users to the group) to take place while the file server remains available to the users on the network.

-- User control of passwords: lets users change their own passwords, providing a higher level of user security.

-- Copy-protection settings for applications: lets the network administrator set applications programs run from the server so that they cannot be copied by network users.

-- Folder-lock: when selected by the folder's owner, prevents movement, renaming or deletion of the folder.

"Superuser" option: when enabled, allows the network administrator perform routine server maintenance while the server is active.

-- CD-ROM volume support: which allows information on CD-ROM drives attached to the AppleShare file server to be shared by network users.

-- Support for the Apple IIGS and Apple IIe workstations. The AppleShare File Server can now provide network file service to Apple II users when used with AppleShare IIGS Workstation Software (for the Apple IIGS) or the Apple II Workstation Card (for the Apple IIe).

-- AppleShare Print Server

AppleShare Print Server offers concurrent support of up to five printers. A single server can handle combinations of networked LaserWriter, ImageWriter II and ImageWriter LQ printers.

AppleShare Print Server runs concurrently with AppleShare file service on the same Macintosh server, and lets users continue working instead of
waiting for documents to print.
It provides centralized print-queue management which lets network administrators set high-priority documents to print immediately, remove documents from queue, or suspend printing. AppleShare Print Server can be accessed from any Apple IIe, Apple IIGS, Macintosh or MS-DOS computer on the network.

Both the AppleShare File Server and the AppleShare Print Server will be available in 1988.

Contact:
Your local Apple Edn. Reseller.

Teaching Resources

A list of Teaching resource books published by Apple in conjunction with various educational bodies. All these titles are available from your local reseller.

A guide to Apple Computers in Education
Macintosh Plus
Desktop Publishing "You may never go Back"
Apple IIGS
Macintosh family
IIGS Software Directory
Australian Educational Software Directory
Getting to Work with MicroSoft Works
Learning 'Ready Set Go'
Using the Macintosh for Desktop Publishing

What's new from Apple.

Getting what you Font from your Macintosh
Using Desk Accessories on the Macintosh
Using the Macintosh in Education
Apple II Book
Using Computers in the primary School
Rosie the Counting Rabbit
Print Shop
Reader Rabbit
Music Studio
Deluxe Paint II
Learning MacWrite 5.0
Introduction to Macintosh
Learning MacPaint
Quick Guide to MacDraw
Mastering Macintosh
Networking the Macintosh
Integrating MS-DOS based PC's
Connecting to IBM Hosts
Integrating Digital Equipment Corp Systems
Connecting to other Computing Environments

Some posters are also available.

Supplier: Your Local Apple Education Reseller

Key Apple II Software June 88

Application	Version
Apple IIGS Finder	1.1
ProDOS 16	1.6
ProDOS 8	1.4
Macintosh	
System	6.0

Finder	6.1
HyperCard	1.2

Software Updates Available for Apple Products - some additional information.

-- Macintosh software version 6.0 has these features:

-- Increased processing speed
-- CloseView: a special screen utility can magnify the Macintosh screen display from 2X to 16X normal size. Requested from either the control panel or the keyboard (as the user prefers), the magnification can be black on white or white on black. Documentation for CloseView is included in the Software 6.0 software manual.
-- MacroMaker: a utility that can automate repetitive tasks or create keyboard equivalents for menu items. MacroMaker is as easy to use as a tape recorder -- record a series of keystrokes or menu actions to form a "macro," and then assign a keystroke combination to recall the macro when needed. Finder functions such as opening and closing files and folders can be automated.

-- Macintosh System Software Version 6.0 also includes previous features such as the MultiFinder operating system which is Apple's multitasking software that extends the power of the Macintosh.

-- HyperCard Version 1.2 is the latest update for this Macintosh programming tool and includes these features:

-- Support for read-only media, like the AppleCD SC CD-ROM drive
-- Multi-user access to HyperCard stacks over AppleShare
-- Improved search and retrieval capabilities, with speed increases of 400% to 600% over version 1.1
-- Hiding and showing card and background pictures
-- "Peeking" for faster access to HyperTalk scripts
-- New HyperCard commands
-- Write-protection for stacks
-- New keyboard shortcuts

-- Apple Access II Version 1.2 This version of Access II supports the Apple IIGS, and is also compatible with the Apple IIe and Apple IIc. Resellers upgrade their customer's Access II disks by copying the new software on to their existing disks, or on to a new 3.5-inch 800K disk.

-- ProDOS 1.1.1; Free update available through Reseller.

-- Macintosh Pascal Version 2.1 Customers upgrading from Macintosh Pascal 1.0 bring in the Macintosh Pascal Programs disk and Macintosh Pascal Utilities disk to their dealer. Dealers copy Version 2.1 onto the original Version 1.0 disks at no cost to the customer.

-- MacTerminal Version 2.0; Customers upgrading from MacTerminal, bring their original MacTerminal diskette to their dealer, who copies Version 2.0 onto it, at no cost to customers.

What's new from Apple.

Other Updates

Claris Products

For upgrade information about the following Claris-labeled products.

MacWrite 5.0
MacPaint 2.0
MacProject II
MacDraw II

contact Claris on 02 697 8666.

APPLEWORKS™ NETWORK VERSION

Description:

AppleWorks, the best-selling software for the Apple II, combines word processing, mailmerge, database management and spreadsheet capabilities into one powerful, fast and easy-to-use productivity tool for the Apple II family of personal computers.

AppleWorks/Network is a special version of the product, designed for use on the AppleTalk network system. One AppleWorks/Network stored on the AppleShare file server will support multiple Apple IIe and Apple II GS workstations linked to the server. The number of users who can be served varies depending on the hardware configuration of the network system.

Apple II workstations on the network can launch AppleWorks/Network from the server, eliminating the need for individual disk drives. Users can create and store personal files as well as share files with other users on the network. AppleWorks/ Network supports the access privileges provided by the network system software.

Who would use it?

In elementary and high schools, AppleWorks is used extensively for teaching computer application skills. It is also the basis for curriculum software and teacher administration templates. Schools that install AppleTalk networks can use AppleWorks/ Network on their network system.

Small businesses that make extensive use of AppleWorks will adopt the AppleWorks/Network Version if they have multiple AppleWorks users on an AppleTalk network.

What does this mean?

• Gives users in a network environment easy access to AppleWorks applications and files.

• Simplifies disk management since there is no need to use multiple floppy disks. Instead, Apple II workstations can access AppleWorks and AppleWorks files from the server.

• Expands the capabilities of AppleWorks through network integration. AppleWorks files can be easily transferred over the AppleTalk network into MacWrite or other Macintosh software programs for expanded graphics and desk top publishing

support.

• Provides a cost-effective software alternative for AppleWorks users who have run Apple II workstations on an AppleTalk network.

Features:

• One network version will support multiple users
• Easy to install on an AppleShare server
• Network "aware": modifications to support multiple users and manage increased storage capacity.

Licensing:

AppleWorks/Network is licensed for use on properly configured Apple II workstations that are linked to an AppleShare server on which AppleWorks/ Network has been installed.

System Requirements:

AppleTalk Network System including:

• Macintosh Plus, SE or II with AppleShare software Version 2.0

• Apple IIe personal computers (minimum 128k; 256k recommended) with Apple II workstation cards or Apple IIGS computers (minimum 760k).
Apple II GS's also require that Apple II GS Workstation Software is installed on the network server

• Appropriate cabling

What's new from Apple.

What else is there?

AppleWorks/Network includes:

• AppleWorks/Network program disk
• The AppleWorks Reference Manual
• AppleWorks/Network Users Guide

Upgrades?

An upgrade to Apple Works/Network will be available to AppleWorks customers with multiple copies of AppleWorks.

When?

AppleWorks/Network will be available upon release of the AppleShare file server, version 2.0, the Apple II Workstation Card and the Apple IIGS Workstation software, expected to be available this year. Pricing has yet to be finalised.

## The Works to Works public Domain release text.

I hereby give Apple Computer, Inc. permission to distribute the transporter in any manner you see fit to the Apple sales and support reps, field systems engineers and your dealer K-12 education reps. If a charge has to be made for a complete package of materials of which the transporter is a part, that is OK.

The following is a statement in the documentation I am also sending you:

"Works to Works Transporter" is copyrighted 1986 and 1987 by Productivity Software, Inc. and is in the public domain.

It may be given away freely to anyone and must not be individually charged for. (However, dealers providing 'conversion services' using the transporter may charge for such services. Any questions, I can be reached at 408 867-9425.
Don Williams
President
Productivity Software, Inc.
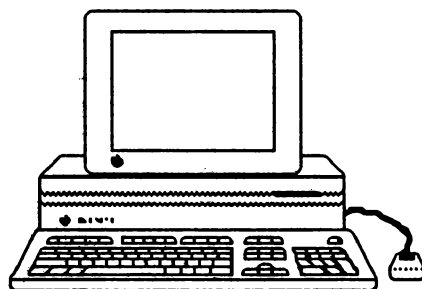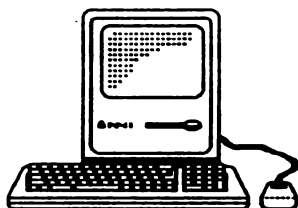
Fillers
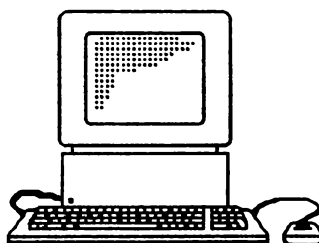
Who does what at Apple?

Education people at Apple are spread over three departments Marketing, Sales and Support. Essentially Marketing looks at longer range areas and plans plus advertising and sponsorship of conferences etc. Education has a number of people in marketing including

Diana Ryall
Sue Daniels
Kathleen O'Donoghue

Sales deals with more immediate areas and also look after certain aspects of tenders as well as giving demonstrations etc. Education has a number of people in Sales including

Graeme Inchley
John Paull
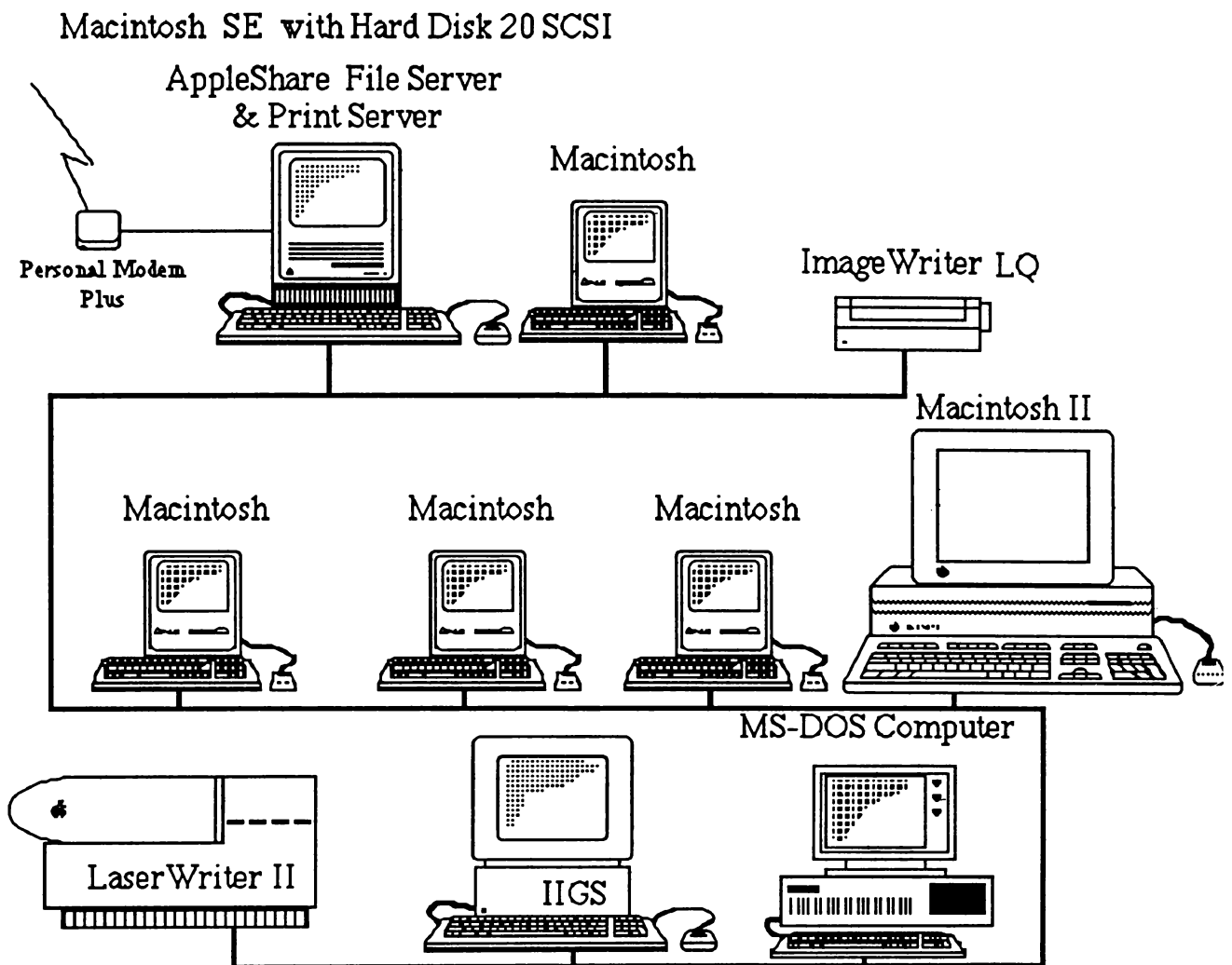Bruce McCarthy
Karen Lyden

Support deals with more technical areas as well as having some involvement in tenders. Education has a number of people in support including

Conrad Silvester
John O'Neill

plus support can call on our general support team for highly complex problems.

The over whelming majority of these people have had previous practical classroom teaching experience to call on in order to have an idea as what to will 'work' in a classroom or school which is really the bottom line for the whole process.

What's new from Apple - continued.

Macintosh SE with Hard Disk 20 SCSI

AppleShare File Server
& Print Server

Macintosh

Personal Modem
Plus

ImageWriter LQ

Macintosh II

Macintosh   Macintosh   Macintosh

MS-DOS Computer

LaserWriter II

IIGS

AppleShare V2.0 allows Apple II systems to be incorporated within the network as well as MS-DOS machines.
See page 14 for full details as to what the AppleShare environment means for your region's computers.

 Education

What's New for the Apple - Third Parties.

Overleaf

David Southall, whom I am sure some of you would know, recently returned from Europe and brought back a collection of clip art. Some of which will appear in future issues of AppleChat. Certain censorship has been exercised as to what should appear, however I felt that this piece from Italy was worthy of a page to itself. Not bad with MacPaint!
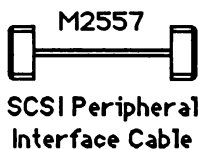
```
M2557

SCSI Peripheral
Interface Cable

SCSI - A high speed parallel data ex-
change medium.
```
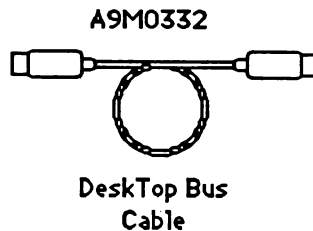
```
A9M0332

DeskTop Bus
Cable

ADB standard for input devices.
```

Disclaimer:

All information contained in this section of Apple-Chat is as accurate as possible at the time of publication. Some third party software and hardware may no longer be available or may have changed distributor between the time of publication and distribution. If any inadvertent inaccuracies occur the author apologises for any problems that may result.
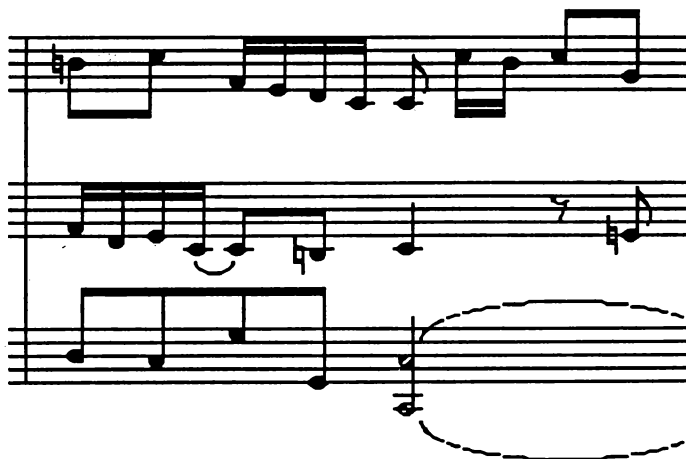
What's new - Apple II

AppleWorks GS

Yes you guessed it the Apple-Works for the IIGS and boy is it worth a close look! The program combines word processing, spreadsheeting with graphics, database, paint, communications and page layout all within a single program and can read and write Apple-Works files. It fully harnesses the Mac interface on the IIGS and you can have six documents open at once on the screen. Watch out for this one in early October this year. Claris so liked it that they bought the company a day after the program was announced. Further details as they come to hand.

Contact: Your local reseller or Claris on 02 662 7944 for more details as to availability and price.

Multi-Flex

I mentioned this product as an alternative for those looking for a dedicated spreadsheet alternative to AppleWorks. Having read the Call A.P.P.L.E. review of this product I guess I would say that second thoughts may well be in order.

Millionaire

An Apple version of the early Macintosh simulation of the stock market. It is a useful way to introduce students to some of the basic principles of the stock market and gives them the op-

portunity to buy and sell both stocks and options. Charts, news items etc are available to present information and students need to try and distinguish the wheat from the chaff there. American based yet due to the internationalisation of stock exchanges over the last years of general benefit.

The US price was $49.95 and the distributor of Millionaire for the Macintosh in Australia was Imagineering.

Walt Disney's Winnie The Pooh

A blustery wind came up last night in the Hundred Acre Wood; it picked things up and blew them everywhere. Now it's up to you to find and return all the missing belongings to the characters in the wood. Enhances mapping and reading skills, and logical thinking. The price is $49.95.

Contact: Your local education reseller or Edsoft ph 03 8784746

ChestTop Publishing

A printer ribbon designed to allow you to print out designs and transfer them (iron on) onto tee shirts etc. Excellent for that fete or other activity where a personalised tee shirt is required. Requires an ImageWriter I or II. The price is 89.95 for schools.

Contact: Your local education reseller or Dataflow.

Explore Australia

An excellent program in the Explore A Story series which has been developed in Australia and

M2053

AppleTalk System Connector Kit

M20542
DB-9
AppleTalk Connector Kit (DB9)
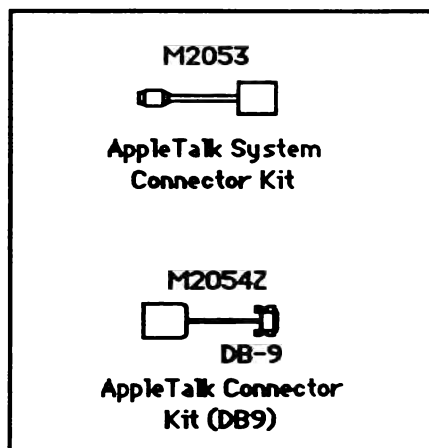
features designed to appeal to years 4,5, and 6 social studies students. Two program disks a comprehensive Teacher's Manual and a 32 page student book. Scenes include Jenolan Caves, Rottnest Island, Phillip Island, Exhibition Centre and Parliament House in Canberra, Cradle Mountain, the Simpson Desert and the great Barrier Reef. Australian History from the DreamTime through to the gold Rush period. The price is under $150.00 and is well worth the money.

Contact: Your local Education reseller or Dataflow 02 331 6153

SuperPrint

SuperPrint as the name implies allows you to make BIG pictures and print them out using an Apple Imagewriter or compatible printer. Forty square panels of a haunted house are one example and dinosaurs stretching over many pieces of continuous paper are another. Yes it is a bit like PrintShop but has the ability to print very large drawings and pictures. The cost is around A$80.00 and the product is

available from your local education reseller or Ashton Scholastic.
Contact: Your local Education Reseller or Ashton Scholastic 043 283555.

Publish-It!

A must to review for anyone with an Apple IIe or IIGS and 128K. A true desktop publishing program which will help schools give their students in practical classroom publishing. The program supports most of the features of the commercial DTP packages and is less than one-third the cost. The program requires a mouse to be used effectively (as does most of the better software nowadays). Cost is under $200.00 and for the features it provides is worth every penny.

Contact: Your local Education Reseller or Edsoft ph 03 8784746

Robby Rabbit

Robby Rabbit lives in a large burrow next to a family that grows vegetables. Robby has to stock his storeroom with vegetables. The burrow is large and there is a number of exits, some of which are beset with perils such as a water sprinklers or tractors. Few words are used and cassette is provided to tell the story. A map is also available. The program has been specially designed for use by handicapped students; only one key is pressed and this can be replaced by any device that can work a switch. Cost is $60.00
Contact: Your local Education Reseller or Jacaranda Wiley.

What's New for the Apple:- Third Parties - continued.

Charlie Brown's 1,2,3's

One of a new series from Random House. This program helps children recognise numbers, find them on the keyboard and learn to count objects. While they learn, the PEANUTS gang helps reinforce these skills with lively animations. Numbers and counting from 1 to 10 are taught with both words and symbols, and the concept of simplesets is introduced. Both a school and a home version is available. The prices are $59.95 school price and $50.99 for the home version.

Contact: Your local education reseller or Dataflow.

AC/BASIC

AC/BASIC is recommended for use by Call A.P.P.L.E. as a must for writing BASIC programs. It is the only BASIC compiler for the Apple IIGS that is compatible with Microsoft BASIC programs written for the Mac at this stage. Its features include:
True 16-bit compiler, unlimited program size, unlimited data and string space size, independent subprograms, alphanumeric labels and global variable declaration for subprograms, full window and button support, no toolbox knowledge required, powerful sound statement and music sequenced in background automatically.
The cost US is $99.95 from Call A.P.P.L.E, it is likely to be available through AAPDA.
Early birds could contact:
A.A.P.D.A. ph 042 268880

3.5 Disks, the way to go!
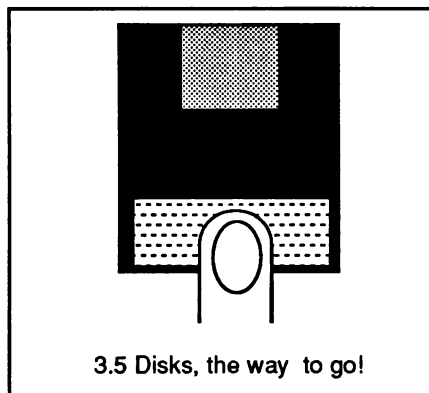
Word Perfect IIe, IIGS

The Word Perfect Corporation have an interesting philosophy. Any machine which is used for business or education etc and which has a major effect in these areas needs a common word processor where the files created on one machine can be transferred with no fuss to another machine. Word Perfect is that sort of program, the files created on an Apple IIe (with a 3.5 disk drive) can be read into the Macintosh direct) and used in that machine. They can then be transferred (though who would want to) to a DOS box with a 3.5 drive and used there. The IIGS version of Word Perfect also has this transfer ability and has harnessed the toolbox of the IIGS very well. A fully featured word processor that many users of AppleWorks will look at for more advanced word processing features including a built in spelling checker and thesaurus and the ability to define fonts and font types. The manual is

well designed and comprehensive in nature and the product has all the quality hallmarks of a company which specialises in word processing. Well worth a close look especially in you have a mixture of Apple IIe, IIGS and Macintosh in your area.
The price is $265.00 for the IIe version, $300.00 for the IIGS version and $579.00 for the Macintosh version. Education prices are considerably less than this and are available upon request.

Contact: Your local Education Reseller or Dataflow.

Think Quick!
Developed by the Learning Company for children aged 7-14, Think Quick! features six different game levels in which players race through a castle, solve clues, unlock doors in a logical sequence, open secret panels, build an enchanted knight and ultimately chase away the dragon. The program has been designed to enhance problem solving, logical reasoning, decision making, creative thinking and observation and analysis. The program has been developed by the same person who developed Rocky's Boots and Gertrude's Secrets. The program runs on the Apple II series with a 3.5 inch version for the Apple IIGS. The cost to schools is $79.95 and retail $94.95. Contact your Local Education Reseller or Ashton-Scholastic (043) 283555.

Education

What's New for the Apple:- Third Parties - continued.

Where in Europe is Carmen Sandiego?

Yes, Carmen is breaking out all over and now there is a specific version which concentrates on Europe. The series is, as is well known, quite motivational and useful in a Social studies area and would fit quite well into a number of primary and secondary social studies or geography units.

Interested people could contact: Your local Education reseller or Questor ph 02 662 7944 .

TimeOut series

I haven't seen these yet but have had excellent reports from experienced Apple II and AppleWorks users as to the effectiveness and usefulness of this series. There appear to be three packages, Time Out Ultra Macros, TimeOut Quick Spell and Time Out Super-Fonts which as they are developed by the Beagle Bros should be good value but as I haven't seen them yet I cannot say and also cannot say whether they will work on the Apple IIGS.
Price: A$? I haven't seen them yet.
.Contact your local Apple Education reseller or Questor.
Ph 02 662 7944

Teleworks Plus

Yes, you guessed it a telecommunications program which works in conjunction with List Plus, Draw Plus, Writer's Choice Elite etc. Well worth a look especially if you are currently using one of the other products in the series.

Contact: Your local Education Reseller or Questor.
Ph 02 662 7944

Personal Newsletter

This program provides integration of text, graphics and page composition for the Apple II series. It includes a wide slection of fonts and many type styles, including underline, boldface, italics, reverse, outline, shaodw, fat and tall. Other features include word wrap. cut and paste, up to 10 columns, newspaper style headlines, on-screen help and 30 fill patterns.
The program can import from PrintShop, DazzleDraw amongst other double hi-res programs and is supplied with a library of clip art. ASCII text files can be imported from any word processor.
Early birds could contact:
Dataflow

MusicShapes

An Apple IIGS program that provides a creative learning envi-

Weeee!!! AppleWorks GS is coming!

ronment that involves the user in the process of music making and idea development. The user travels back and forth between screens making and arranging graphic patterns to produce rhythmic, melodic and sound patterns. These musical blocks can be built into complex multi-timbral musical structures.

The program allows the user to modify sounds stored in the program. These sounds can be produced by the Ensonic chip of the IIGS or by linking the Apple II to a Casio CZ synthesizer. The goal of Music Shapes is to stimulate creative thinking and sensitivity through the active involvement in music composition. No knowledge of notation is necessary.

Early birds could contact:

Dataflow

The Character Factory

This program enhances word processors and other programs by allowing the printing of special characters that are not found on the computer keyboard. With the character factory you can create your own characters, assign characters on the keyboard for any layout you want, combine your characters with Factory sets, and create totally new character sets. This product is distributed by Call A.P.P.L.E.

isys forth

ISYS FORTH-83 is designed specifically for the engineering and scientific applications area. The system supports the whole

Education

Apple II series including the Apple IIGS, the product allows for support of turtle and cartesian graphics, floating point with transcendentals, macros etc and is priced at US$99.00 with a 150 page manual.

The systems can be obtained from:
ILLYES Systems
P.O.Box 2516
Sta A
Champaign IL 61820
Ph 217 359 6039

Apple IIGS Buyer's Guide

A new edition featuring over 300 IIGS specific products has just been released and your local education reseller should have them by now or you could contact the:

Redgate Communications Corporation
660 Beachland Blvde
Vero Beach
Fla 32963
Ph 305-231-6904

Peter Dailhou (the one with the Teddy bear postcard) has set up his own company involved in sourcing and distributing software to schools in NSW. The company is called JPR Pty Ltd and is involved in exclusively in software of an educational nature. Look for Pete at the Leura conference and get his particulars.

Macintosh Section

Mac School

Mac School has now been upgraded with the inclusion of multi user Student details and a significant upgrade to the Library module. Double periods are now available in the Scheduler and the print options from the Scheduler have now been hugely expanded. ASCII Transfer is now available to allow you to import and export ASCII files. An Australian company has been contracted to develop an accounting module to integrate with Mac School for use both here and for export to the US. Yes, as I have said before this program is the one which actually CREATES a timetable for your school plus having many other features including a very flexible method of producing Reports for parents and other people who seem to want forms and statistical information and do not seem to consider timetabling an issue. ASCII export is also available .

Multi user Attendance, Library and Scheduling are due for release by the end of September 1988.

The program is sold on a site license basis and the offer re free upgrade to multi user is still open though if you wait until multi user arrives it will be extra cost of $1000.00. A number of Apple Authorised Resellers have now been trained in Mac School and are competent to demonstrate the product to you and support it after you purchase it.

For further information contact:

Dataflow
134 Barcom Ave
Rushcutter's Bay
NSW
Ph (02) 331 6153

FreeHand

A very high end graphics package for the Macintosh that allows for colour fill and certain other features not found in Illustrator and Illustrator88. Users will apreciate the PostScript output from the product with the less tightly constrictive methods of Illustrator for developing lines circles, arcs etc. Unfortunately this product does not have a special education pricing policy at this stage.

Available from:Your Local Authorised Education Reseller or InfoMagic ph 02 975 1044.

Full Impact

Full Impact is the spreadsheet package that incorporates all those features missing from Excel whilst having the same power and functionality of Excel. The product looks very promising and is due for release around September of this year from Ashton Tate. Ashton Tate are getting quite involved in the education field and are willing to help with training and support of all their products which include dBase-Mac, Full Write Professional, FullPaint and now Full Impact. This product does have an education pricing policy.

Contact: Your local Education Reseller or:Ashton Tate
Ph 02 868 3600.

 Education

What's New for the Apple:- Third Parties - continued.

MacWrite 5.0

The long awaited upgrade to MacWrite, overdue mainly due to the formation and etc of Claris Corp. The program provides a good basic word processor and now supports a Spelling checker and thesaurus. A couple of other features like bottom scroll bars etc make this a very good program to start someone off with Macintosh word processing. Attractively priced for schools and available from Claris.

Contact: Your local Authorised Education Reseller or Claris on 02 697 8666.

MacPaint 2.0

A significant upgrade to Mac-Paint also from Claris and supporting multiple windows, multiple zoom and a detachable tool bar a la HyperCard, since they are both the brainchild of Bill Atkinson.

Another good starting out program for Macintosh users and attractively priced for schools.

Contact: Your Local Education Reseller or Claris Ph 02 697 8666

MacDraw 2.0

An excellent upgrade to this popular product. The product now supports colour and can be used as a basic page layout program which at the relatively low cost is well worth considering. Supports multiple levels of zoom the ability to rotate through any angle etc., well worth a look.

Upgrade prices are also available for all the former Apple products now published by Claris.
Contact: Your local Reseller or Claris.

MacTELETEX

This program provides a powerful new communications facility. It can send Telex messages from the Macintosh to national and international terminals. Obviously these terminals can send messages to the Macintosh, of which there are over 2 million worldwide.

Using this network you can also transfer letter quality text documents and messages between Macintosh and other computers. Macintosh documents and files such as DTP draw/paint type graphics and applications are able to be sent electronically.

The system requires a Mac with at least 512Kb, a printer (ImageWriter or LaserWriter recommended), something called Telecom UTC* (Universal Teletex Controller) and a Teletex Network connection.

Further information can be obtained from a MacTELETEX reseller or Telecom. However knowing the standard answer when you ring enquiries I would suggest that you call 02 6990044 as they may have some idea of what you are talking about.

What follows is some very, very new programs which have appeared on AppleLink and which I have reproduced here as they may be of interest to regions. No I do not have pricing, the distributor and I have not seen them, yet.

MAC LIBRARY SYSTEM (MLS)

ISPN: 11566-510

DESCRIPTION:
Integrates library tasks including Acquisitions, Online Catalog and Circulation. Supports up to two million catalog records with 32000 circulation copies of each cataloged item, two million circulation records and two million patron records. The base system provides the platform for accessing and manipulating the various components of MLS. Each data file is linked to other data files by logical associations. The Online Catalog module provides a mechanism for creating and maintaining bibliographic records. Each record contains the fields necessary to catalog a library item. The online catalog may be searched to obtain a subset of records for processing or viewing. Catalog Card sets and labels may be produced for each copy of an item. Catalog listings by Title, Author, Subject and Call Number provide a hard copy resource. The Circulation module provides an inventory control system for checking in and checking out items. Overdue notices and On-Hold notices may be produced individually or all at once. Reports include all items overdue, complete

Code for turning off color on IIGS from Basic.
1POKE 49232,0:POKE 49239,0:POKE 49164,0:POKE 49246,0: X% = PEEK(49193)

2 IF (64*(X%/64))-(32*(X%/32))=0THEN POKE 49193, (X%-32)

3 POKE 49185,128

inventory of items, and patron reports detailing circulation activity. The Circulation module is bar code and bar wand compatible. The Acquisition module allows for processing of orders. The operator enters the order information and the vendor, account and patron information is pulled up automatically from their particular files. The online catalog is automatically searched to retrieve catalog information and to tie the order to any existing catalog record. A book order is produced which can either act as the purchasing paper or be attached to the purchase order for reference. ILL orders may also be generated. Upon receiving the item(s), one command allows the transfer of all relevant information into the online catalog and circulation files. Budget information associated with the funding account is updated automatically. The multiuser version is designed to work in a networking environment using Apple's AppleShare fileserver and allows loading of the data files onto a fileserver with access through LocalTalk. The number of workstations is only limited by the server resources and networking capabilities present.

Leura - a workshop on the future.
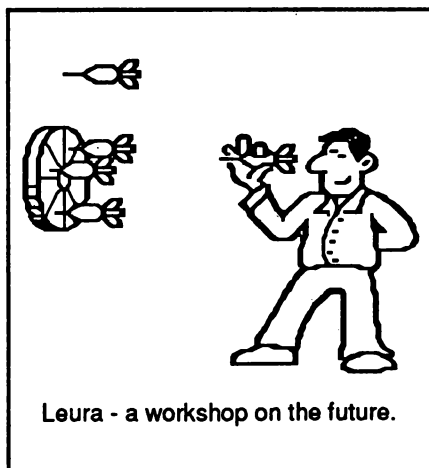
REQUIRES :
ImageWriter or LaserWriter printer, two 800K disk drives or hard
disk.
er, two 800K disk drives or hard disk.

Multiuser. Two 800K disk drives or hard disk, ImageWriter or
LaserWriter printer, AppleShare and AppleTalk cabling system.

VENDOR: CASPR (USA)
Limited Warranty, Demos Available.

MINDSTORM-A COMPUTER WORKBOOK VER-1.0

ISPN: 65262-550

Full Warranty, Updates Available Backups Available, Demos Available.

DESCRIPTION:
Contains a series of imaginative exercises to remediate major grammatical errors and punctuation mistakes made by basic writers. Errors are covered comprehensively with a detailed set of exercises that vary in level of difficulty and range of experience. Grammatical exercises take the student on the adventure of his choice, such as a visit to a world famous restaurant (fragments), a rodeo (comma splices and fused sentences), a 'ghostbusting' (subject/verb agreement), and favorite puppy

(pronoun/antecedent agreement). The punctuation series involves the same type of activities.

Available for:

APPLE IIE
APPLE MACINTOSH

VENDOR: RAYMOND CLINES & ELLEN BARKER (USA)

PC MACTERM
ISPN: 27200-175
Enables the user to run a PC from a Macintosh, either through a modem, direct cable connection, or on an AppleTalk network. Works with pcAnywhere III (ISPN 27200-150), which runs on the PC. Any Mac user can run all programs on a PC, all peripherals attached to the PC, and all internal cards, such as IRMA cards,network adapter boards, etc. Supports the text modes of all PC video display adapters. Offers complete compatibility with not only IBM software, but IBM hardware and data files too. The user can connect a Macintosh to any IBM compatible computer and run programs as if sitting at the IBM screen and keyboard. Any program which runs on the IBM can be run from the Macintosh, including programs which access networks or use special hardware like CD ROMS or high speed modems. A single IBM could be attached to an AppleTalk network, providing IBM compatibility to any Mac network participant. If the user has a Macintosh at home and an IBM compatible in the office, use

 Education

this program with a modem and connect to the IBM in the office. Print E-Mail, run Lotus, or download a PC file to the Mac.Works with Apple's Multi-Finder, so the user can run other Macintosh programs while an IBM program runs in the background.

Connects through the Mac serial port at speeds up to 19.2K. The Macintosh mouse can be used as IBM cursor keys. Password protection is provided for modem connections. Either or both of the Mac/IBM keyboards can be used for application input. A dial directory is provided for storing phone numbers of remote computers and two-way high-speed file transfer is included. AppleTalk network connections can be made using the Shiva NetSerial async gateway product.
REQUIRES :
IBM compatible running pcAny-where (ISPN 27200-150)
Will operate with Macintosh Plus, SE or II.
VENDOR: DYNAMIC MICRO-PROCESSOR ASSOC (USA)
Limited Warranty.

HYPERATLAS

ISPN: 50675-300

DESCRIPTION:
Allows users to access geographically based data in Hyper-Card stacks and includes a set of maps that cover the whole world. Links country names on the map to three information stacks that contain cards for each

country. The Economic Information and Population Information stacks contain basic information about each country. The User's World Info stack contains a card for each country that is linked to the map of that country. With this stack, users can enter their own geographically based data into Hyperatlas, then access the data through the map interface.
Contains a special stack for the United States that includes a map of each state, an information card for each state, and an information card for each major city. Users can copy these stacks and enter data about U.S. states and cities that will be accessible through the map interface. The entire format of the USA stack can be copied and used to create databases for other countries.

VENDOR: MICROMAPS SOFTWARE, INC. (USA)
Limited Warranty.

MAPMAKER VER-3.0

ISPN: 69106-500

Creates maps of United states by individual state, group of states, or county or by the entire country. Also the world by country. Includes everything needed to produce publication quality maps. It is easy to uncover hidden relationships in geographic data and then demonstrate these findings with striking presentation graphics. In addition to creating high resolution graphics, it also provides a powerful data analysis

framework. Up to 30 data variables for each area of the map may be entered into the database, or imported from other Macintosh applications, such as Excel spreadsheet. Maps are printed in full color on the ImageWriter II and ImageWriter LQ printers, as well as on a variety of pen plotters and ink jet printers(with separately sold "driver" software). It is capable of displaying maps in full color on the Mactinosh II when equipped with a color monitor. Maps can show 'curves', such as highways, and "fixed circles" such as trading zones whose radius in miles is defined by the user. Comes with 58 U.S. Census demographic and population statistics for each state, 13 for each county in the U.S. and 20 more population statistics for 176 countries of the world.

VENDOR: SELECT MICRO SYSTEMS INC (USA)
Limited Warranty (90 DAYS ON MEDIA AND MANUALS)

MACINTOSH BIBLE-HYPERCARD EDITION
ISPN: 75998-300

A stackware edition of The Macintosh Bible on three diskettes that contains hints, tips, shortcuts and Macintosh information. A Hypercard(ISPN 03900-300) stack version of the book 'The Macintosh Bible'. Contains thousands of tips and undocumented advice to simplify use of the Macintosh computer. Implementations of the Hypercard 'find' command and multiple, cross-referenced indices allow searching for information by

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title, subject, and/or class and go to the item or series of items selected. Allows users to create new records and expand upon its existing data. A copy of the 420 page book, and a 48 page illustrated reference manual are included with each three disk package. Comes with on screen help.

VENDOR: STAX INC (USA)
Limited Warranty (UNCONDI-TIONAL 30 DAY MONEY BACK GUARANTEE) .

MACAUTHOR VER-3.4

ISPN: 28068-200

DESCRIPTION:
Curriculum authoring software for educators, trainers and authors to design interactive com-puter-aided lessons. Authoring software is an entire course de-velopment package, a do-it-yourself set of curriculum formats for instructors to'plug' their subject materials. Presenta-tion formats provide for text, art, multiple choice, fill-in-the-blank, relational, and ready reference courses.

Integrated branching permits easy-to-do courseware complete with review and student perfor-mance reports.
Launch to other Macintosh pro-grams or your own. Used for all sorts of interactive presentations. Supports variable size text, fonts and styles and provides synthe-sized speech with phoneme exceptions. Allows user registra-tion and evaluation with automat-ic tracking and scoring and al-lows exporting of data for

analysis. Allows cutting and past-ing between courses, has course markers, videotext overlay and a 'show' menu to synchronize for-mat presentations. Allows editing while operating with a WYSI-WYG (What you see is what you get) format. Runs on Macintosh SE and II with color graphics. Has an interface to the Pioneer LD-V4200 and Panasonic TQ-2026 with automatic recording control. Will run on networks running AppleShare or other net-works with TOPS. Supports network file locking, and net-work record locking.

VENDOR: EDUDISC INC (USA)
Full Warranty (ON MEDIA) , Updates Available, Backups Available, Demos Available.

And that's all for now folks.
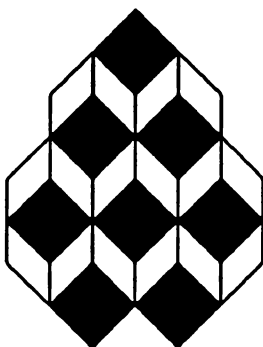
Do You See 6 or 7 Boxes

 Education

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The End.

🍎 Education
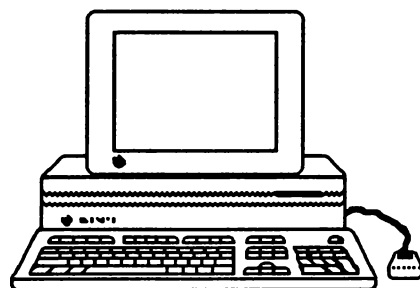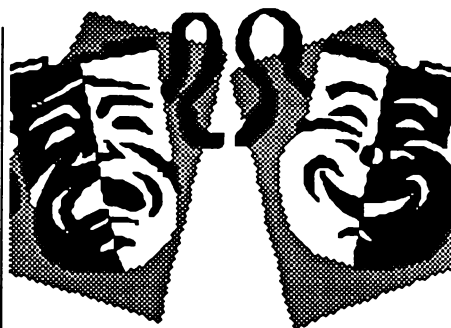
Mac School some curriculum speculation

I have been thinking about Mac School and its ability to **create a** timetable within a school day and started to speculate on what this could mean for a school and the teaching/learning process within a school.

Whilst Mac School handles well such things as custom report formats, marks and multi user entry of student details and attendance as well as having had a huge upgrade to its Library software including the incorporation of multi user, the significant feature of this program is its ability to develop and resolve the conflicts in the timetabling process.

As most people realise, because the manual method of developing a timetable is so exhausting schools generally stick to a single timetable for the whole academic year. Further, due to the huge number of combinations possible within manual timetabling some sort of structure or "GridLines" are placed as a precondition for developing the timetable, thus limiting subject and interest choice before the process begins.

Since Mac School's scheduler starts from the basic premise that kids will choose various courses and teachers can teach various things, some of which they are more interested in than others, then within specified time and room constraints produces a timetable the possibilities for expanded curriculum choice and more flexible teaching/learning structures become much more achievable as timetables can be produced quickly.

Currently a school tends to have a fixed cycle structure and within that structure fixed parameters for a single academic year, but what if you could vary that structure for part or all of the year in order to allow for different student interests or different teaching requirements. What if, for instance, a unit of work in a particular subject required a more extended teaching time but only at that time of year?
Currently, such things have either required extensive negotiations with other department areas or have been consigned into the 'yea nice idea, but' basket.

Now, since you can develop a new timetable with all relevant lists etc within a school day there is nothing preventing a subject unit teaching being designed to be flexible in terms of time requirements and peaks and troughs etc.

Also the course choice for a student has been widely expanded as the software will accomodate a wide variety of student courses.

Another thought has just occured, as we all know we like some parts of a subject better than others and our kids' ability to learn the material is also varied depending upon this interest. Nevertheless, all parts of a subject are of importance because what we may find boring some of our students or colleagues may find fascinating. So we would like as far as possible for the person most interested in the area to teach it but currently this was not really possible. However, using the Mac school timetabling we could create multiple timetables within the academic year reflecting the various interests shown by both students and staff.

Given the relative speed with which Mac School can produce a timetable compared to the current manual method the previous stumbling blocks to curriculum and teaching/learning flexibility in terms of time, staff usage and student choices in order to best help students achieve their potential can be vastly reduced. Other possibilities may occur to you so if you have any thoughts on the matter please drop me a line.

Essentially what we have here is a tool for timetabling that allows administrators to what if? the timetable, for those who remember back to the Apple][days, remember the effect that Visicalc had on the business world of financial forecasting and forward planning. This of course does not even touch on the huge cost savings inherent in being able to automate the timetable production process within a school. How many days are currently spent in your area by senior staff working on the timetable which could be spent in other areas related to enhancing the teaching learning process?

Conrad Silvester.

Apple IIGS

Parts of the system

Analog RGB Screen

RGB stands for
Red, Green and Blue,
Analog means that
the colour signal is sent
as a wave form rather than
as on off signals.

Mouse

The Mouse is a small
electro-mechanical device
that is used to point to
required actions and
instruct the computer
to execute these instructions.

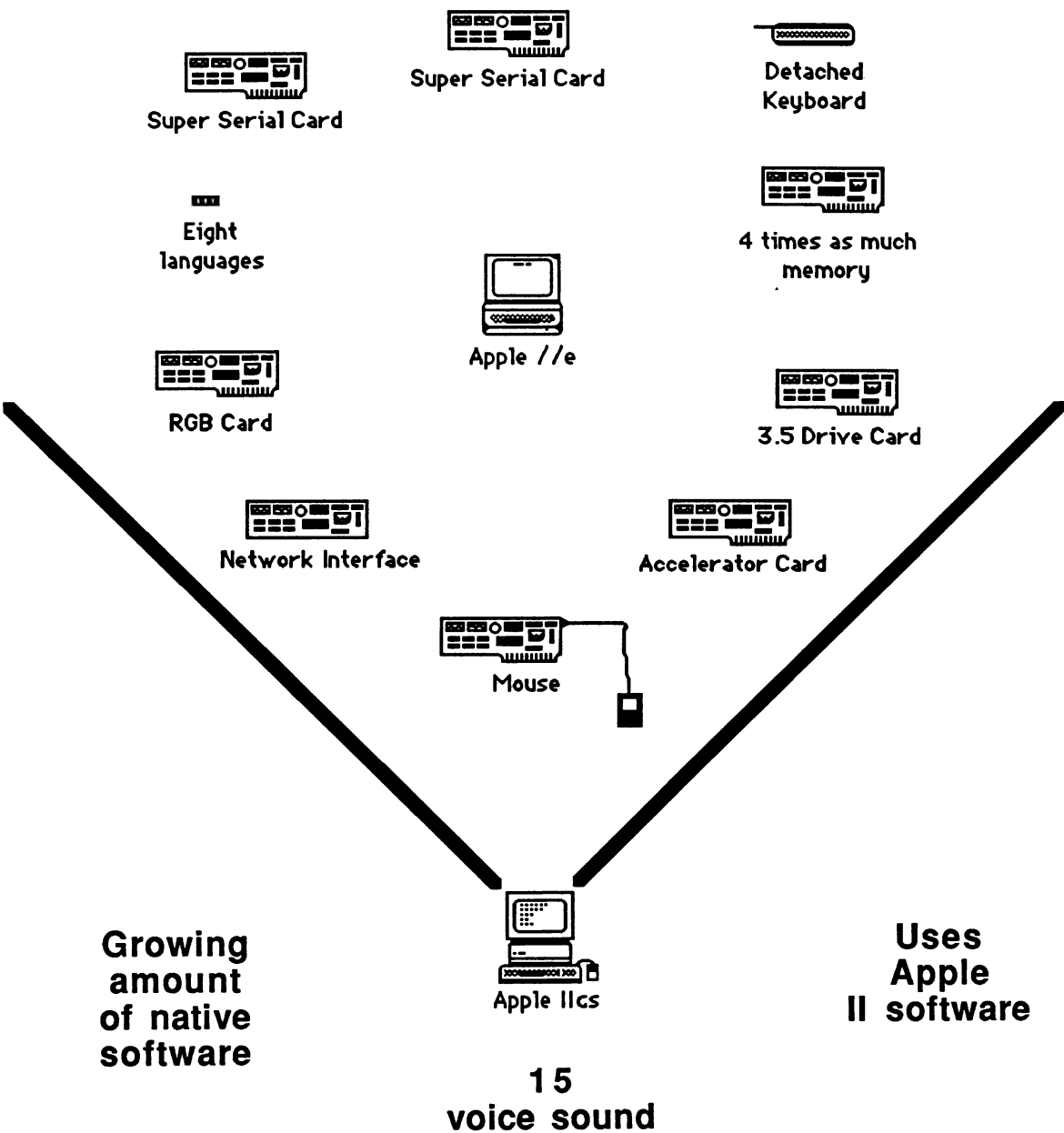## CPU

CPU stands for Central
Processing Unit, the heart
of a microcomputer system.
The Central Processing Unit
of the Apple IIGS the 65C816 is
special in that it has two modes
almost like two hearts.

Keyboard

The keyboard is the main
means of data entry. In some
older computers the keyboard
was also the only way to give
instructions to the computer.

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A Pictorial Comparison

Super Serial Card

Super Serial Card

Detached Keyboard

Eight languages

4 times as much memory

Apple //e

RGB Card

3.5 Drive Card

Network Interface

Accelerator Card

Mouse

Growing amount of native software

Apple IIcs

Uses Apple II software

15 voice sound

"The Apple IIGS"

Education

Apple IIGS

Power

Serial ports -AppleTalk

Joy stick

Disk drive

RGB Mono DTB

Speaker outlet

3.5 & 5.25

Back panel

 Education
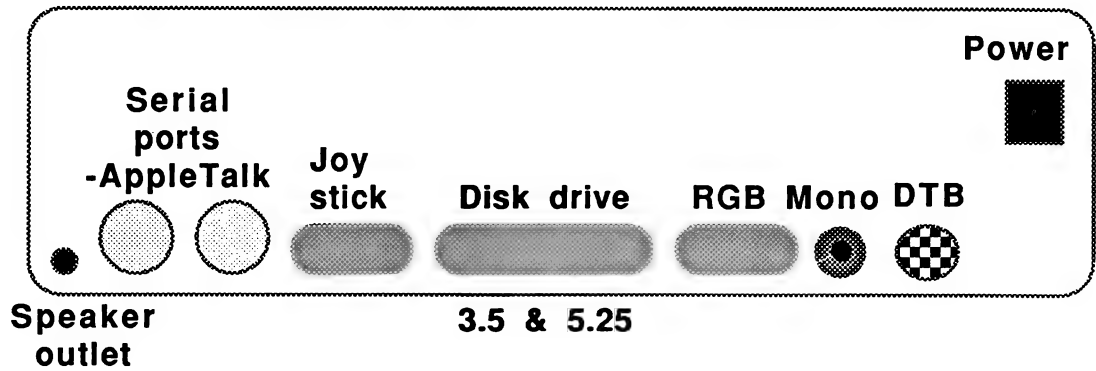
Apple System & Finder Versions
Recommended Combinations

	Macintosh 128K	Macintosh XL	Macintosh 512K/512KED	Macintosh Plus	Macintosh SE	Macintosh II
System 2.0/Finder 4.1	●					
System 3.2/Finder 5.3		●	●			
System 3.3/Finder 5.5			◢			
System 4.1/Finder 5.5				● ◢	● ◢	● ◢
System 4.2/Finder 6.0 MultiFinder				▨	▨	▨

●   **Best System Software for the Hardware**

◢   **Best System Software with AppleShare**

▨   **Requires 2 Mbytes of memory for effective use.**

 Education

LaserWriter Printer

PostScript

PostScript is a special
computer programming language
designed for use in printing of
computer generated graphics and text.

Master Copy

A master copy is a piece
of work which a typesetter
can use in preparing to
make a 'run' of copies
of your work.
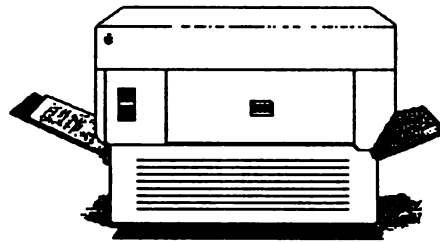
CPU

The Central Processing Unit of
the LaserWriter (68000) has one
purpose to process information
under the control of PostScript.

Photocopy engine

The bottom of the LaserWriter
is similar to a photocopier and
uses the same principle to
transfer your work onto paper.

The new LaserWriter II Series.
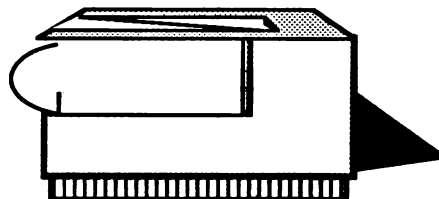
Same Basic Principles

Education

ImageWriter Printers

Bin Feeders
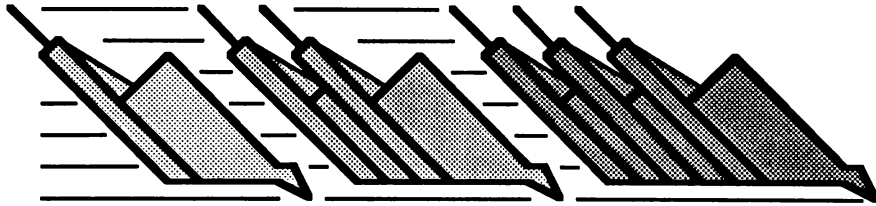
ImageWriter LQ
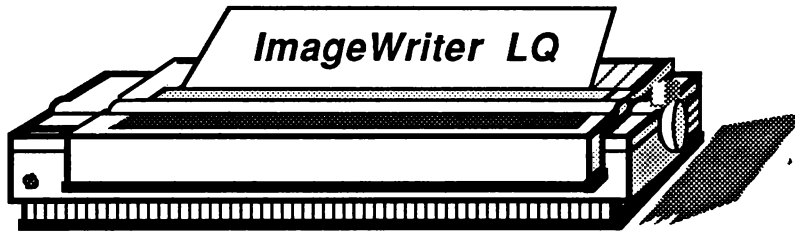
ImageWriter LQ

ImageWriter II

ImageWriter I

 Education
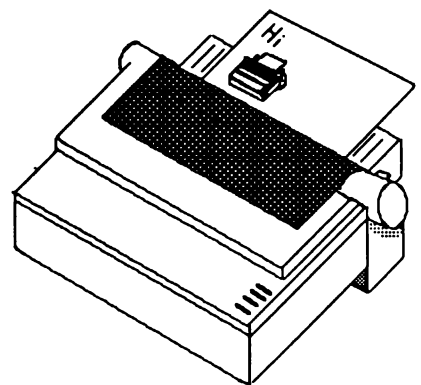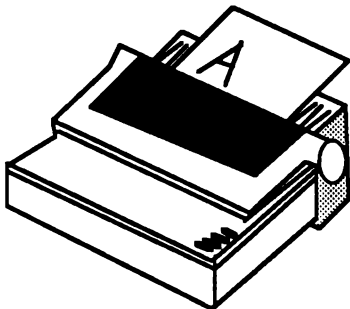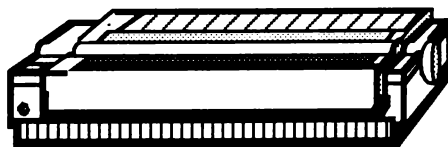
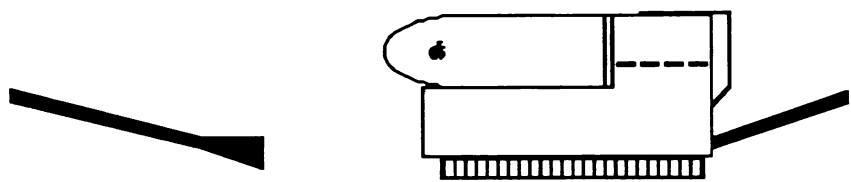# LaserWriter Printers
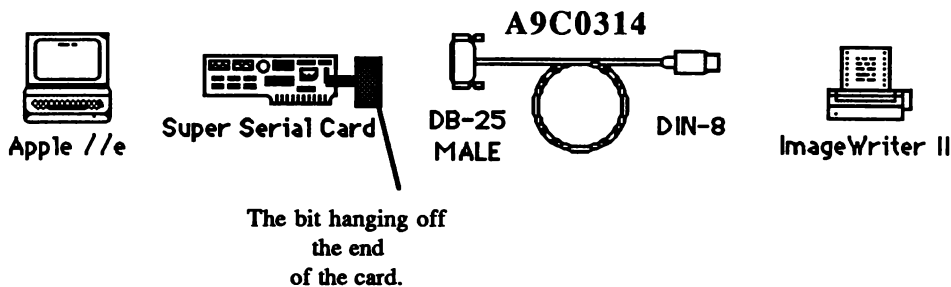
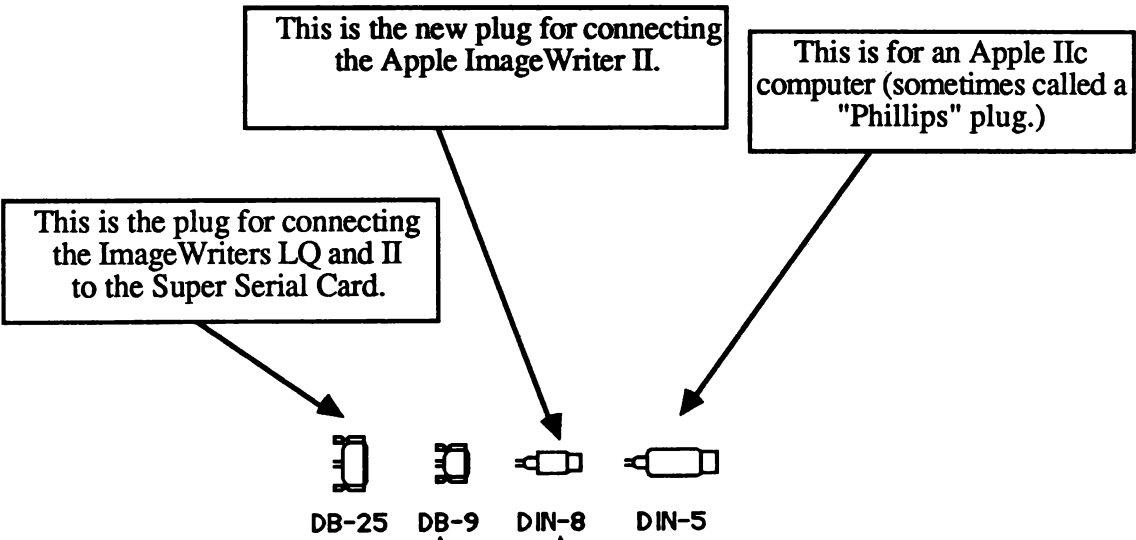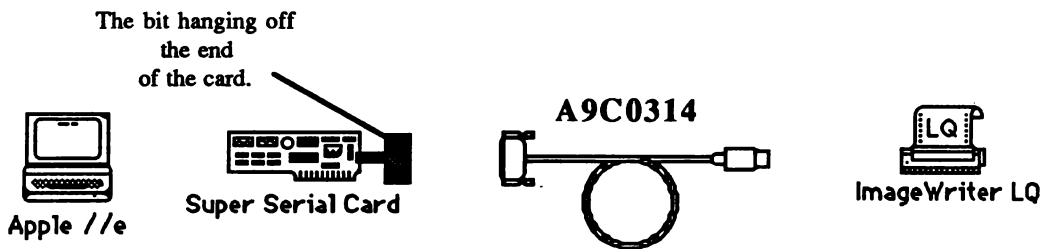NTX

LaserWriter II

NT

SC

Education
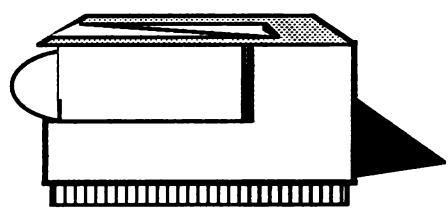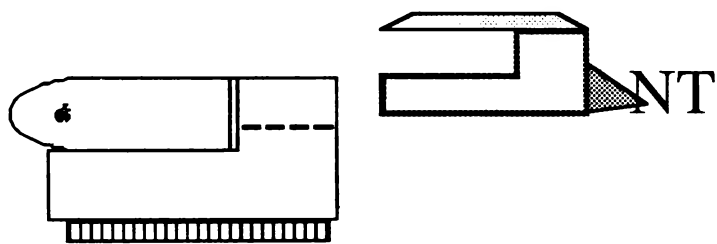
Cables for Apple IIe equipment commonly used (and confused)

Platinum coloured cables.

A diagram of the complete system needed to connect an Apple IIe
to an ImageWriter II printer.

A9C0314

Apple //e   Super Serial Card   DB-25 MALE   DIN-8   ImageWriter II

The bit hanging off
the end
of the card.

A diagram of the complete system needed to connect an Apple IIe
to an ImageWriter LQ printer.

The bit hanging off
the end
of the card.

A9C0314

Apple //e   Super Serial Card   ImageWriter LQ

This is the new plug for connecting
the Apple ImageWriter II.

This is for an Apple IIc
computer (sometimes called a
"Phillips" plug.)

This is the plug for connecting
the ImageWriters LQ and II
to the Super Serial Card.

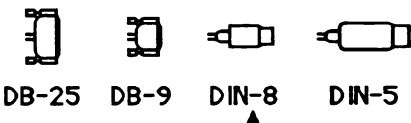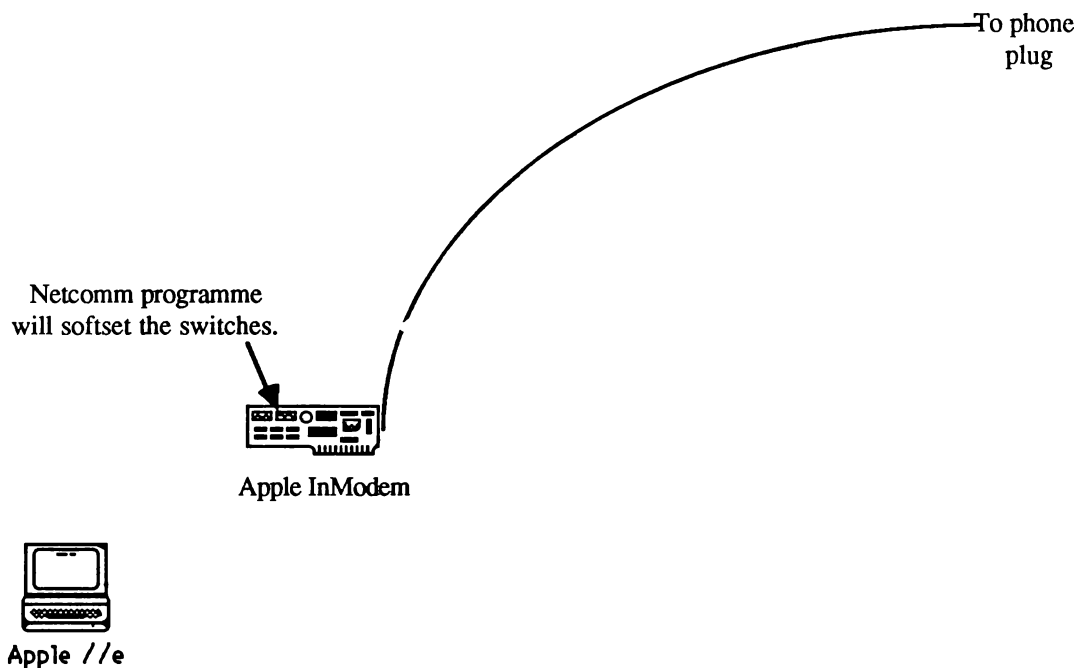DB-25   DB-9   DIN-8   DIN-5

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Cables for Apple IIe equipment
commonly used (and confused)
Platinum series
A diagram of the complete system needed to connect an Apple IIe
to an Apple InModem for 1200 or 300 baud usage.
(eg Telememo)

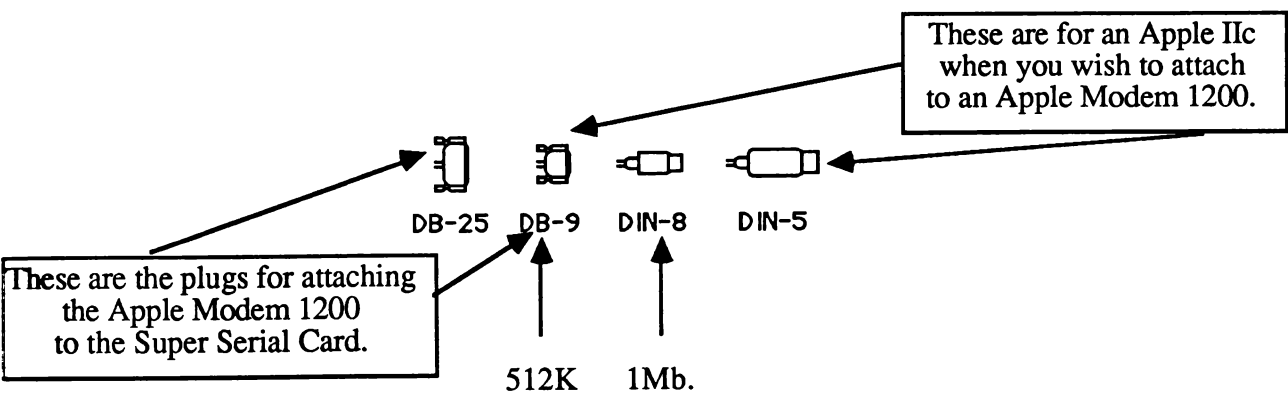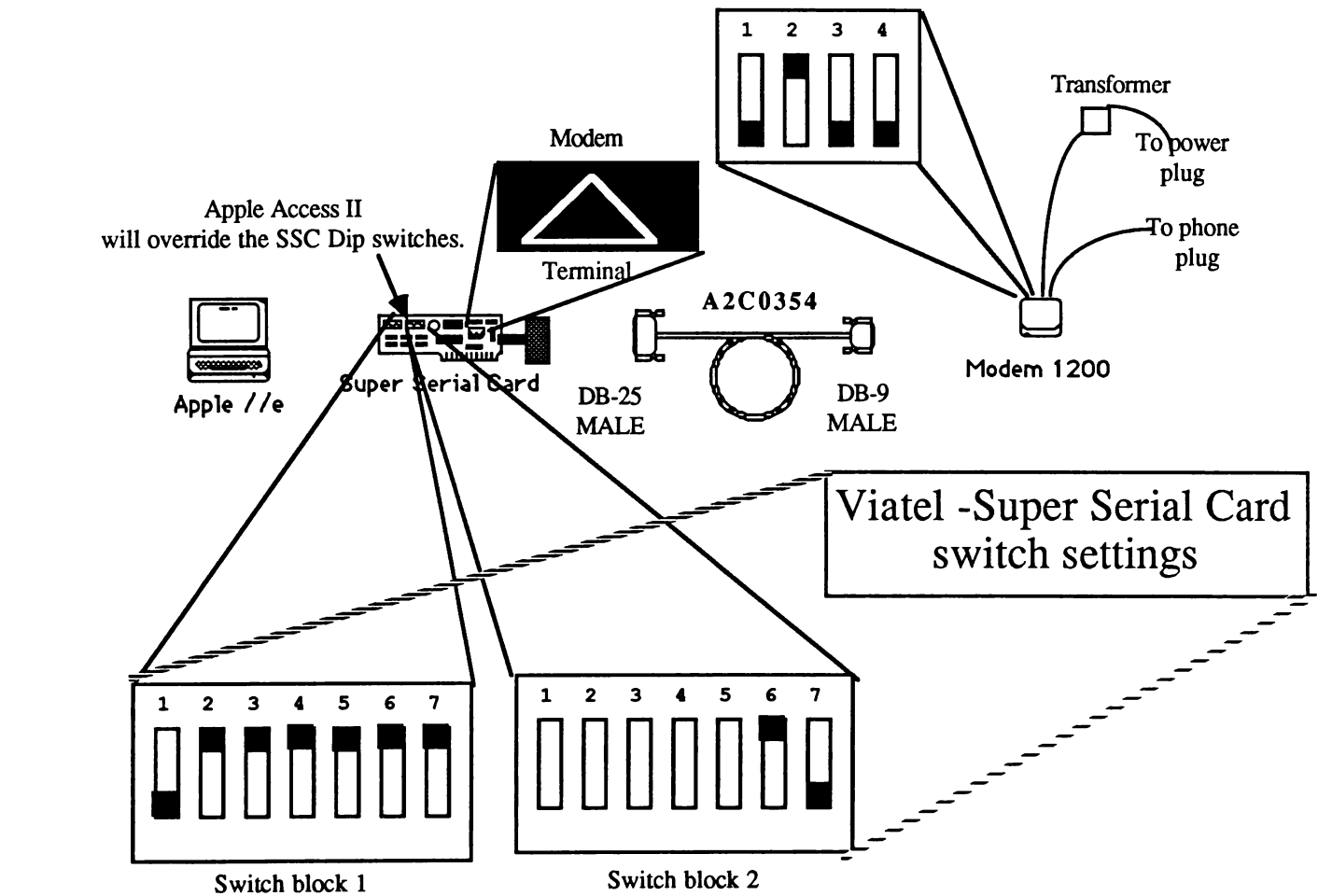Simply install the card in slot two, software does the rest.

To phone
plug

Netcomm programme
will softset the switches.

Apple InModem

Apple //e

DB-25   DB-9   DIN-8   DIN-5
                  ▲

Education

Page 33 (overleaf) shows how to con-
nect to Viatel.

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Cables for Apple IIe equipment commonly used (and confused)

Platinum series
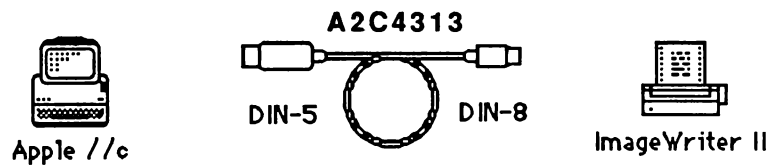
A diagram of the complete system needed to connect an Apple IIe
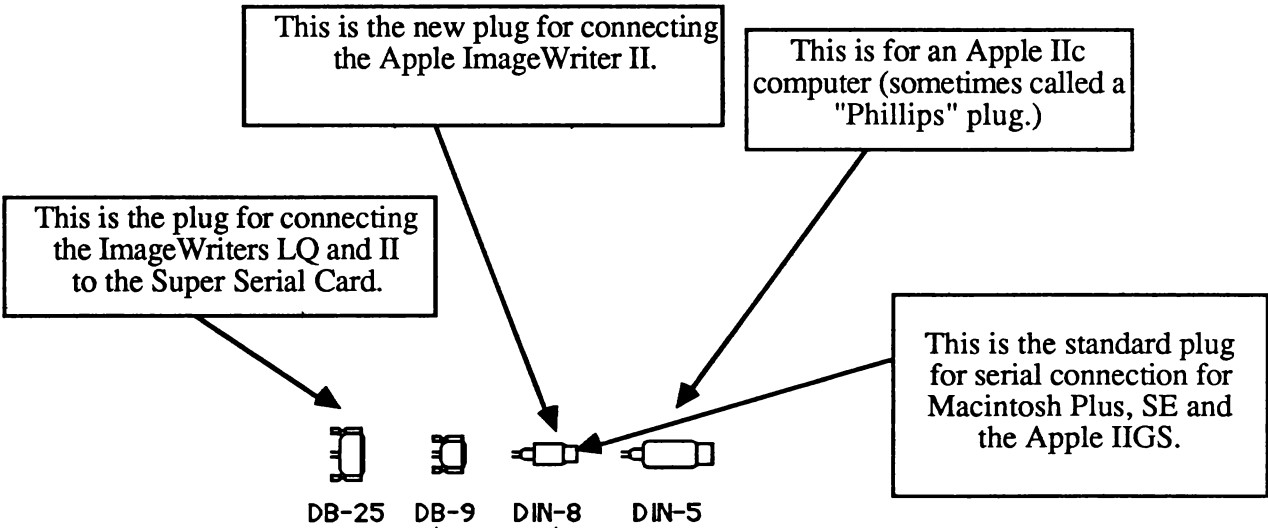to an Apple Modem 1200 for 1200 or 300 baud usage.
(eg Telememo)

Modem

Transformer

To power plug

To phone plug

Apple Access II
will override the SSC Dip switches.

Terminal

A2C0354

Modem 1200

Apple //e

Super Serial Card

DB-25 MALE

DB-9 MALE

Viatel -Super Serial Card switch settings

Switch block 1

Switch block 2

NB Videotex II sets SW2-1 to SW2-5 from software.

These are for an Apple IIc
when you wish to attach
to an Apple Modem 1200.

DB-25   DB-9   DIN-8   DIN-5

These are the plugs for attaching
the Apple Modem 1200
to the Super Serial Card.

512K   1Mb.

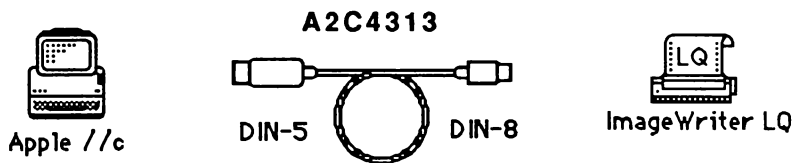These two are used by the Macintosh series.

Education

Cables for Apple IIc equipment commonly used (and confused)

Platinum series

A diagram of the complete system needed to connect an Apple IIc
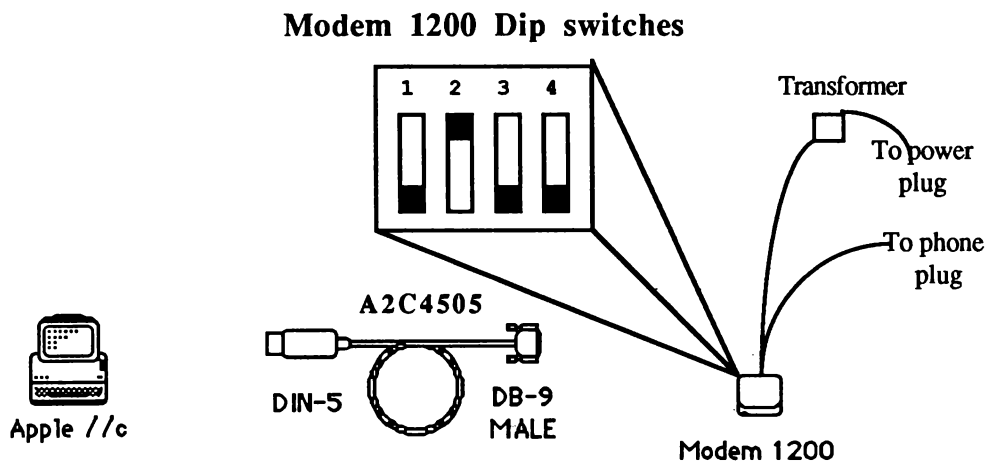to an ImageWriter II printer.

A2C4313

Apple //c   DIN-5   DIN-8   ImageWriter II

A diagram of the complete system needed to connect an Apple IIc
to an ImageWriter LQ printer.

A2C4313

Apple //c   DIN-5   DIN-8   ImageWriter LQ

This is the new plug for connecting
the Apple ImageWriter II.

This is for an Apple IIc
computer (sometimes called a
"Phillips" plug.)

This is the plug for connecting
the ImageWriters LQ and II
to the Super Serial Card.

This is the standard plug
for serial connection for
Macintosh Plus, SE and
the Apple IIGS.

DB-25   DB-9   DIN-8   DIN-5

 Education

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Cables for Apple IIc equipment commonly used (and confused)

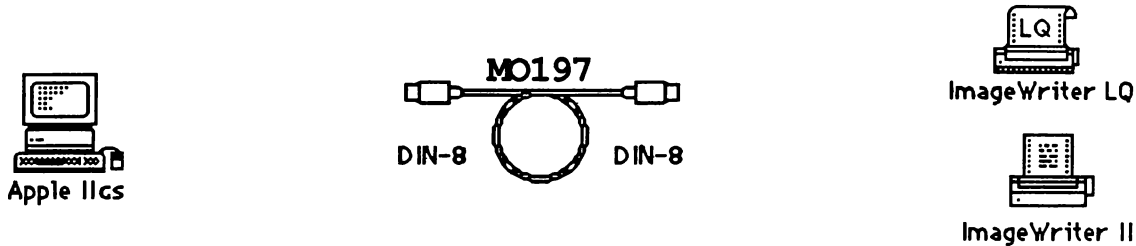A diagram of the complete system needed to connect an Apple IIc to an Apple Modem 1200.

Modem 1200 Dip switches

NB For Viatel select 1200/75 baud from your Videotex II options menu.

 Education

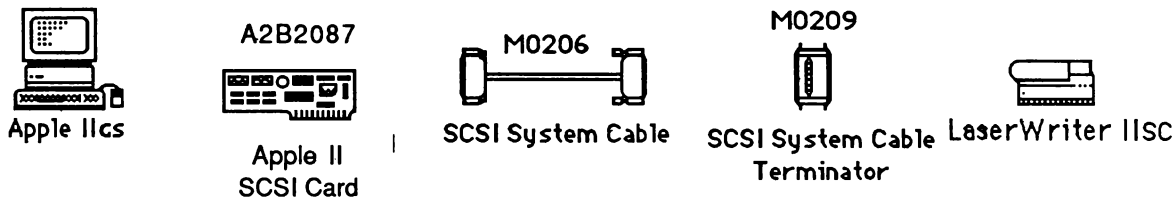# Cables for Apple IIGS equipment commonly used.
Platinum series

A diagram of the complete system needed to connect an Apple IIGS
to an ImageWriter II and LQ printer.

Apple IIcs

MO197

DIN-8   DIN-8

ImageWriter LQ

ImageWriter II

A diagram of the complete system needed to connect an Apple IIGS
to an LaserWriter printer.

Apple IIcs

M2053

AppleTalk System
Connector Kit

M2054Z

DB-9
AppleTalk Connector
Kit (DB9)

LaserWriter

A diagram of the complete system needed to connect an Apple IIGS
to an LaserWriter IISC printer.

Apple IIcs

A2B2087

Apple II
SCSI Card

M0206

SCSI System Cable

M0209

SCSI System Cable
Terminator

LaserWriter IISC

A diagram of the complete system needed to connect an Apple IIGS
to an LaserWriter IINT or IINTX printer.

Apple IIcs

M2053

AppleTalk System
Connector Kit
1 Required per device

LaserWriter IINTX

LaserWriter IINT
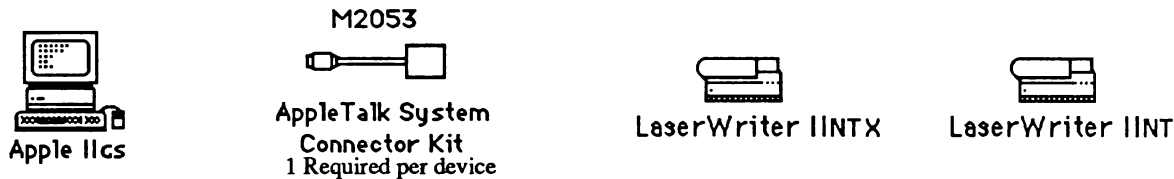
This is the standard plug
for serial connection for
Macintosh Plus, SE, II
and the Apple IIGS.
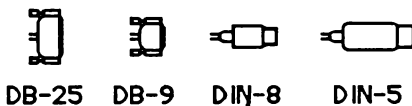
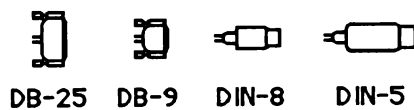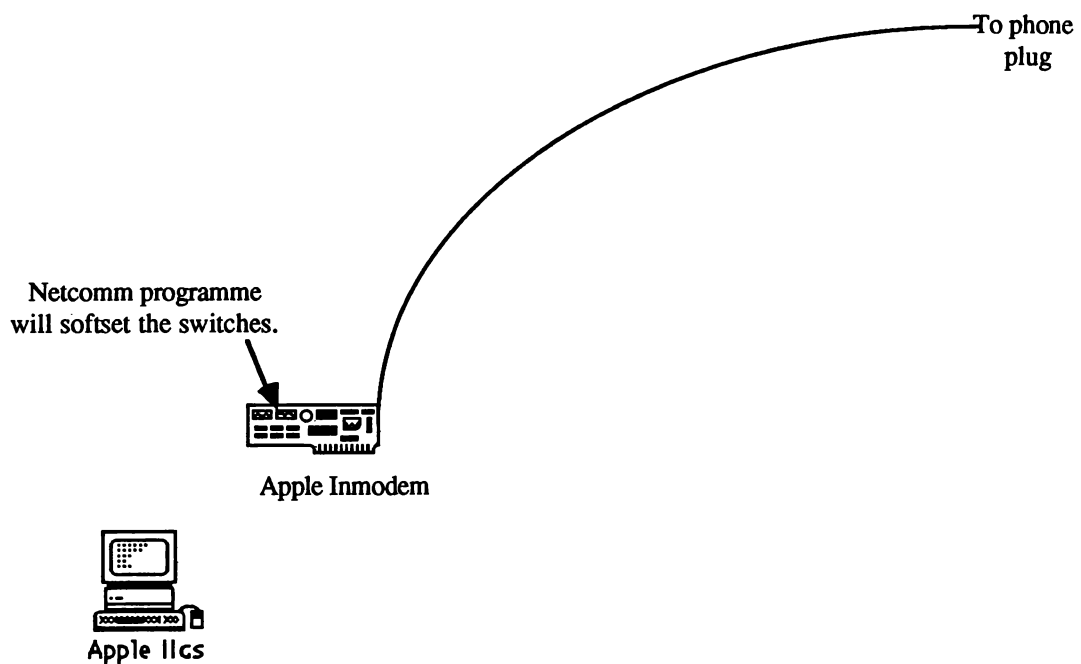DB-25   DB-9   DIN-8   DIN-5

 Education

44

Cables for Apple II GS equipment
commonly used (and confused)
Platinum series
A diagram of the complete system needed to connect an Apple IIGS
to an Apple InModem for 1200 or 300 baud usage.
(eg Telememo)

Simply install the card in slot two, software does the rest.

To phone
plug

Netcomm programme
will softset the switches.

Apple Inmodem

Apple IIcs

| DB-25 | DB-9 | DIN-8 | DIN-5 |

 Education

Cables for Apple IIGS equipment commonly used.

Platinum series

A diagram of the complete system needed to connect an Apple IIGS
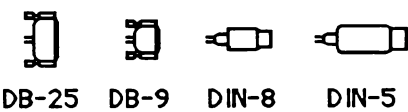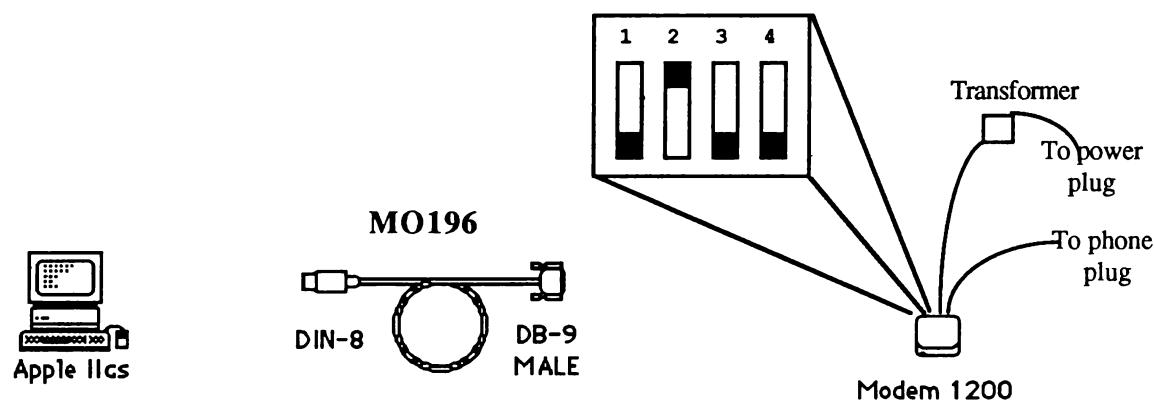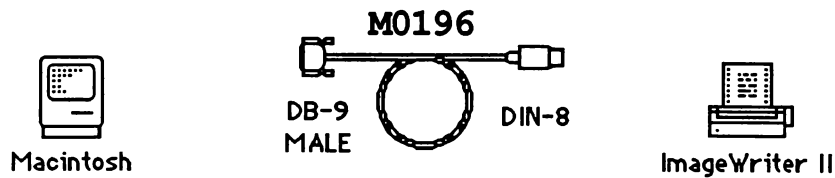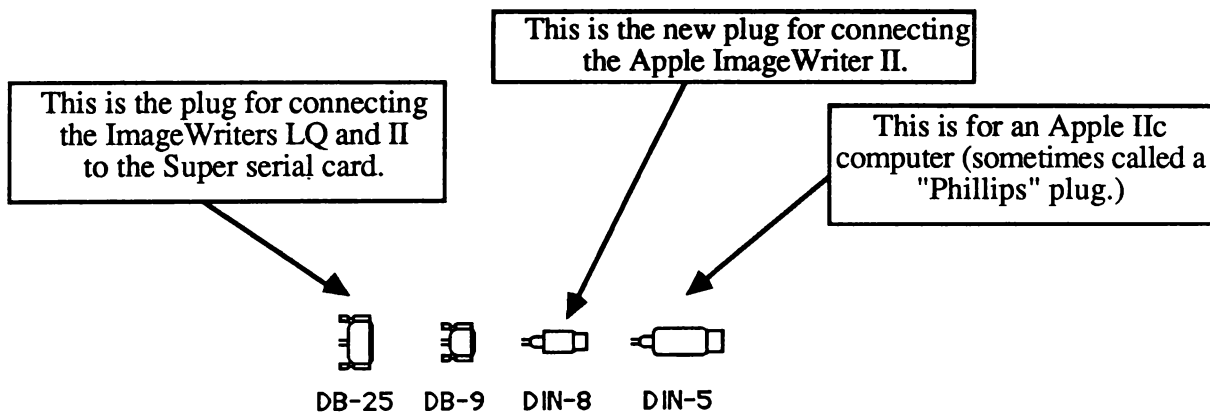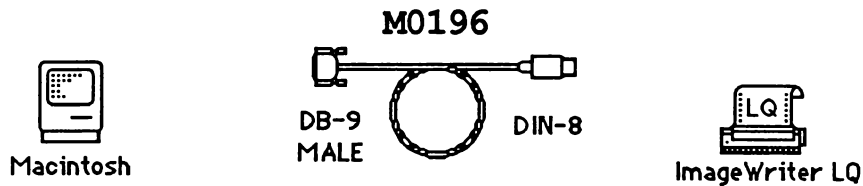to an Apple Modem 1200 for 1200 or 300 baud usage.
(eg Telememo)

MO196

DIN-8   DB-9 MALE

Apple IIcs

Transformer
To power plug
To phone plug

Modem 1200

DB-25   DB-9   DIN-8   DIN-5

Education

46

Cables for Apple Macintosh 512K and 512K/800 equipment commonly used.

Platinum series

A diagram of the complete system needed to connect an Apple Macintosh 512K and 512K/800 to an ImageWriter II printer.

M0196

DB-9 MALE   DIN-8

Macintosh

ImageWriter II

A diagram of the complete system needed to connect an Apple Macintosh 512K and 512K/800 to an ImageWriter LQ printer.

M0196

DB-9 MALE   DIN-8

Macintosh

ImageWriter LQ

This is the new plug for connecting the Apple ImageWriter II.

This is the plug for connecting the ImageWriters LQ and II to the Super serial card.

This is for an Apple IIc computer (sometimes called a "Phillips" plug.)

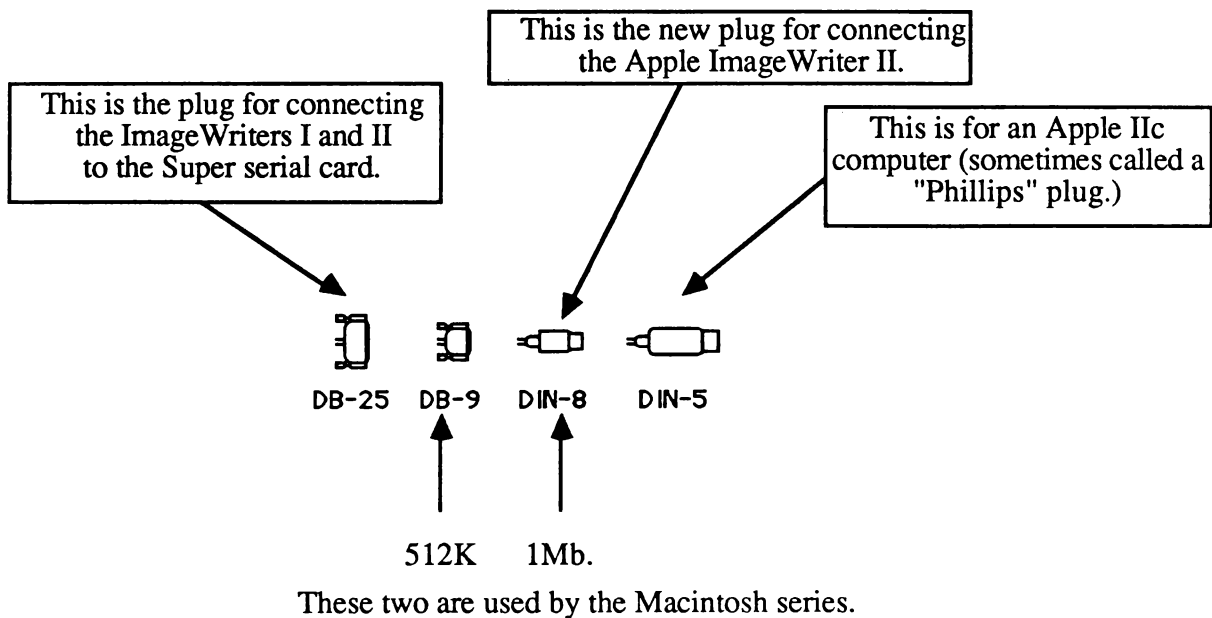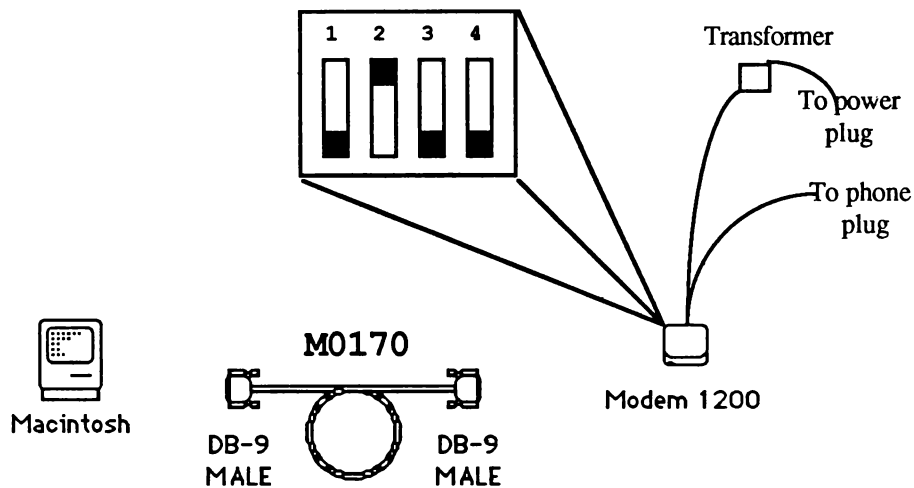DB-25   DB-9   DIN-8   DIN-5

 Education

47

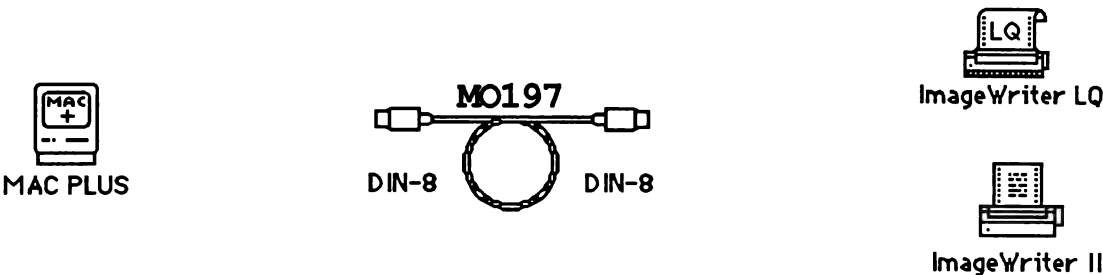# Cables for Apple Macintosh 512K and 512K/800 equipment commonly used.

Platinum series

A diagram of the complete system needed to connect an Apple Macintosh 512K and 512K/800 to an Apple Modem 1200.

Modem 1200 Dip switches

| 1 | 2 | 3 | 4 |

Transformer

To power plug

To phone plug

Macintosh

M0170

DB-9 MALE   DB-9 MALE

Modem 1200

This is the new plug for connecting the Apple ImageWriter II.

This is the plug for connecting the ImageWriters I and II to the Super serial card.

This is for an Apple IIc computer (sometimes called a "Phillips" plug.)

DB-25   DB-9   DIN-8   DIN-5

512K   1Mb.

These two are used by the Macintosh series.
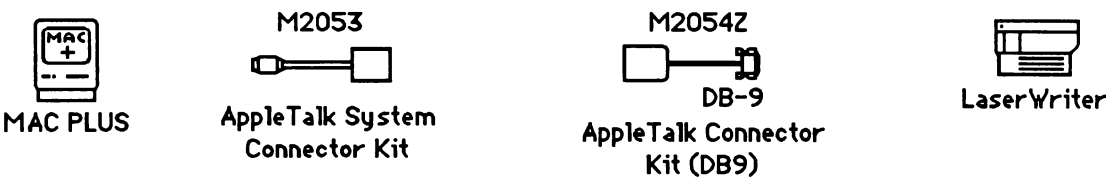
 Education

48

Cables for Apple Macintosh Plus equipment commonly used.
Platinum series

A diagram of the complete system needed to connect an Apple Macintosh Plus
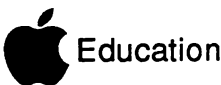to an ImageWriter II and LQ printer.

MAC PLUS   MO197   DIN-8   DIN-8   ImageWriter LQ   ImageWriter II

A diagram of the complete system needed to connect an Apple Macintosh Plus
to an LaserWriter printer.

MAC PLUS   M2053 AppleTalk System Connector Kit   M2054Z DB-9 AppleTalk Connector Kit (DB9)   LaserWriter

A diagram of the complete system needed to connect an Apple Macintosh Plus
to an LaserWriter IISC printer.

MAC PLUS   MO206 SCSI System Cable   MO209 SCSI System Cable Terminator   LaserWriter IISC

A diagram of the complete system needed to connect an Apple Macintosh Plus
to an LaserWriter IINT or IINTX printer.

MAC PLUS   M2053 AppleTalk System Connector Kit 1 Required per device   LaserWriter IINTX   LaserWriter IINT
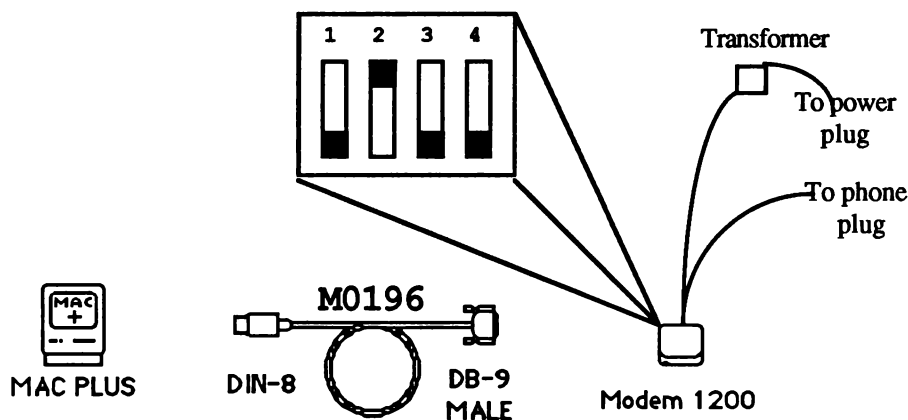
 Education

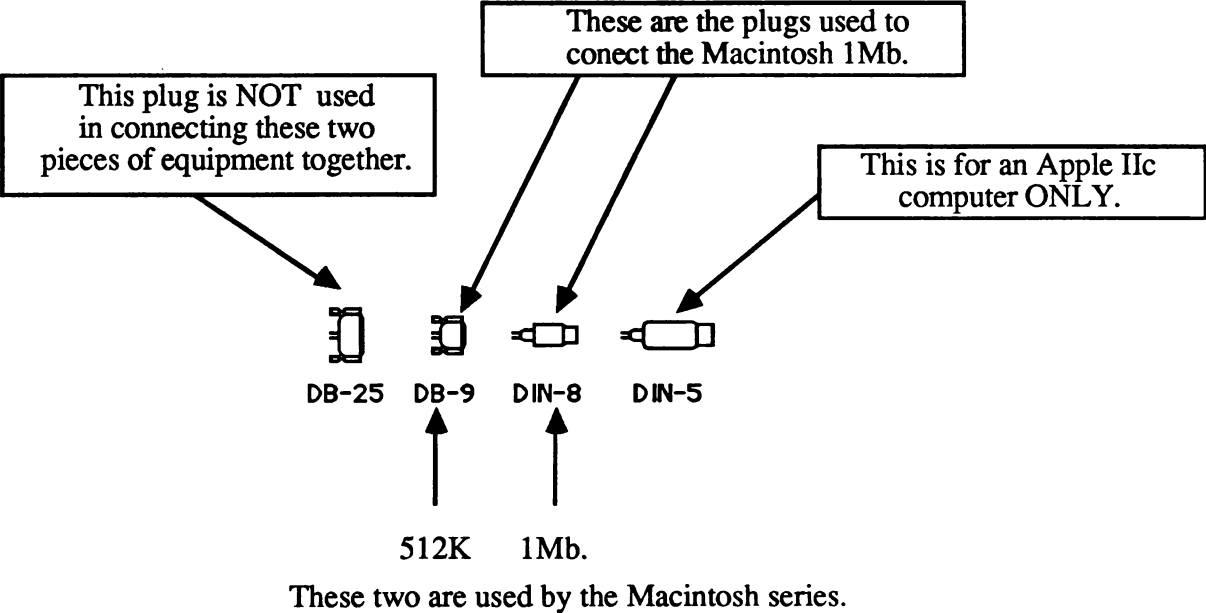# Cables for Apple Macintosh Plus 1Mb equipment commonly used.

Platinum series

A diagram of the complete system needed to connect an Apple Macintosh Plus 1Mb
to an Apple Modem 1200.

Modem 1200 Dip switches

Transformer

To power plug

To phone plug

M0196

MAC PLUS   DIN-8   DB-9 MALE   Modem 1200

MO189-BEIGE
MO199-PLAT. + M0170

These are the plugs used to conect the Macintosh 1Mb.

This plug is NOT used in connecting these two pieces of equipment together.

This is for an Apple IIc computer ONLY.

DB-25   DB-9   DIN-8   DIN-5

512K   1Mb.

These two are used by the Macintosh series.

 Education

50

Cables for Apple Macintosh SE 1Mb equipment commonly used.
Platinum series

A diagram of the complete system needed to connect an Apple Macintosh SE 1Mb
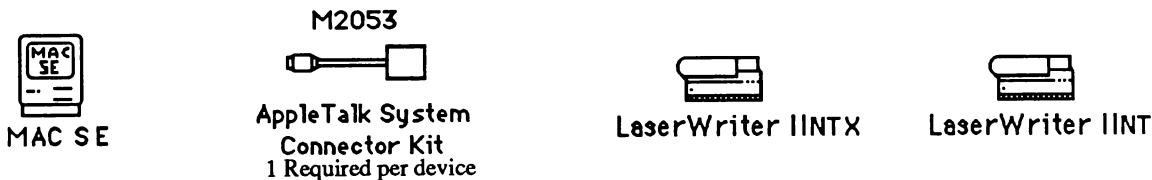to an ImageWriter II and LQ printer.
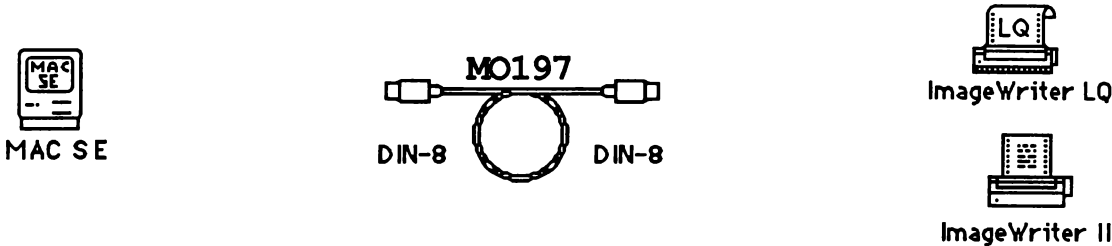
MO197

MAC S E   DIN-8   DIN-8   ImageWriter LQ

ImageWriter II

A diagram of the complete system needed to connect an Apple Macintosh SE 1Mb
to an LaserWriter printer.

M2053   **M2054Z**

MAC S E

AppleTalk System
Connector Kit

DB-9

AppleTalk Connector
Kit (DB9)

LaserWriter

A diagram of the complete system needed to connect an Apple Macintosh SE 1Mb
to an LaserWriter IISC printer.

M0209

M0206

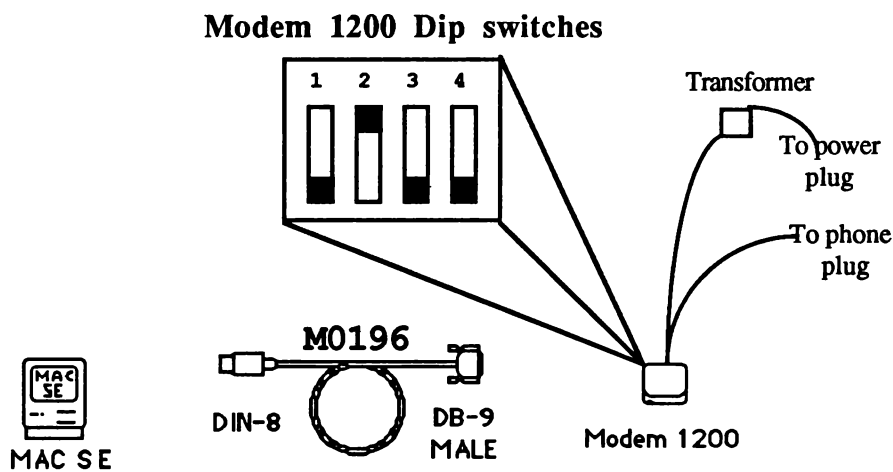MAC S E   SCSI System Cable   SCSI System Cable
Terminator

LaserWriter IISC

A diagram of the complete system needed to connect an Apple Macintosh SE 1Mb
to an LaserWriter IINT or IINTX printer.

M2053

MAC S E

AppleTalk System
Connector Kit
1 Required per device

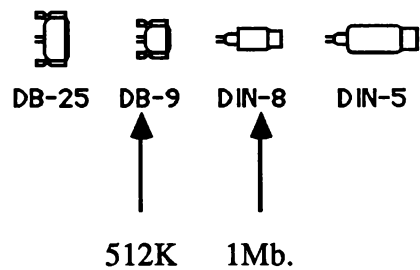LaserWriter IINTX   LaserWriter IINT

 Education

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Cables for Apple Macintosh SE 1Mb equipment commonly used.

Platinum series

A diagram of the complete system needed to connect an Apple Macintosh SE 1Mb
to an Apple Modem 1200.

Modem 1200 Dip switches

MAC SE

M0196

DIN-8   DB-9 MALE

Transformer

To power plug

To phone plug

Modem 1200

MO189-BEIGE or
MO199-PLAT. + M0170
Will also work.

DB-25   DB-9   DIN-8   DIN-5
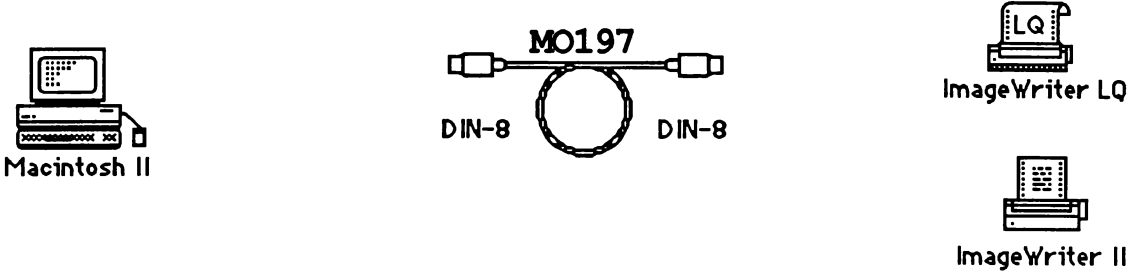
512K   1Mb.

These two are used by the Macintosh series.

Education

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Cables for Apple Macintosh II
equipment commonly used.
Platinum series
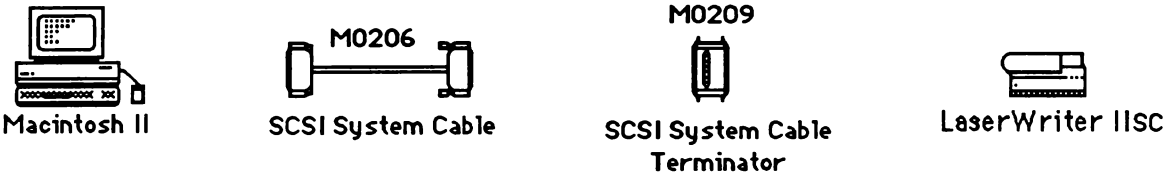
A diagram of the complete system needed to connect an Apple Macintosh II
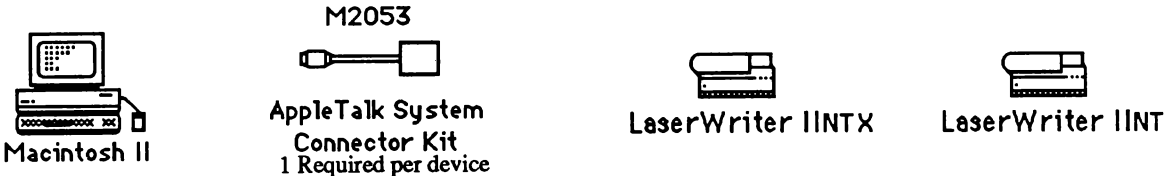to an ImageWriter II and LQ printer.

MO197

DIN-8   DIN-8

Macintosh II

ImageWriter LQ

ImageWriter II

A diagram of the complete system needed to connect an Apple Macintosh II
to an LaserWriter printer.

M2053

M2054Z

Macintosh II

AppleTalk System
Connector Kit

DB-9
AppleTalk Connector
Kit (DB9)

LaserWriter

A diagram of the complete system needed to connect an Apple Macintosh II
to an LaserWriter IISC printer.

MO209

Macintosh II

MO206
SCSI System Cable

SCSI System Cable
Terminator

LaserWriter IISC

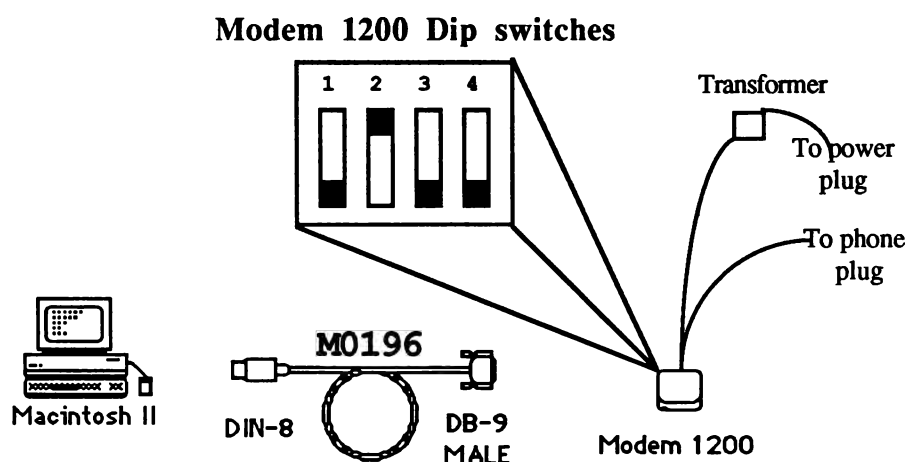A diagram of the complete system needed to connect an Apple Macintosh II
to an LaserWriter IINT or IINTX printer.

M2053

Macintosh II

AppleTalk System
Connector Kit
1 Required per device

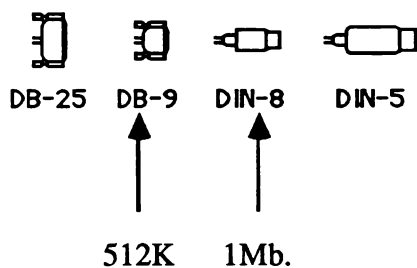LaserWriter IINTX   LaserWriter IINT

Education

53

Cables for Apple Macintosh II equipment commonly used.

Platinum series

A diagram of the complete system needed to connect an Apple Macintosh II
to an Apple Modem 1200.

Modem 1200 Dip switches

| 1 | 2 | 3 | 4 |

Transformer

To power plug

To phone plug

Macintosh II   DIN-8   M0196   DB-9 MALE   Modem 1200

MO189-BEIGE or
MO199-PLAT. + M0170
Will also work.

DB-25   DB-9   DIN-8   DIN-5

512K   1Mb.

These two are used by the Macintosh series.

 Education

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